Draft
General Management Plan
and
Comprehensive River Management Plan / Environmental Impact Statement

National Park Service
U.S. Department of the Interior

Sequoia and Kings Canyon
National Parks
Middle and South Forks of the
Kings River
and North Fork of the Kern River

Tulare and Fresno Counties
California

Volume 1:
Purpose of and Need for Action /
The Alternatives /
Index

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SEQUOIA AND KINGS CANYON NATIONAL PARKS
and
MIDDLE AND SOUTH FORKS OF THE KINGS RIVER AND NORTH FORK OF THE KERN RIVER

Tulare and Fresno Counties • California

DRAFT
GENERAL MANAGEMENT PLAN AND COMPREHENSIVE RIVER MANAGEMENT PLAN / ENVIRONMENTAL IMPACT STATEMENT

Volume 1: Purpose of and Need for Action / The Alternatives / Index

This document presents five alternatives that are being considered for the management and use of Sequoia and Kings Canyon National Parks over the next 15–20 years. The purpose of the *Draft General Management Plan* is to establish a vision for what Sequoia and Kings Canyon National Parks should be, including desired future conditions for natural and cultural resources, as well as for visitor experiences. The no-action alternative would continue current management direction, and it is the baseline for comparing the other alternatives (it was originally alternative B when the alternatives were first presented to the public in the winter of 2000). The preferred alternative is the National Park Service's proposed action, and it would accommodate sustainable growth and visitor enjoyment, protect ecosystem diversity, and preserve basic character while adapting to changing user groups. Alternative A would emphasize natural ecosystems and biodiversity, with reduced use and development; alternative C would preserve the parks' traditional character and retain the feel of yesteryear, with guided growth; and alternative D would preserve the basic character and adapt to changing user groups. The preferred alternative was developed by combining elements of other alternatives through a process known as "Choosing by Advantages." It would bring additional benefits to the parks, and it would be the most cost-effective.

This document also includes a comprehensive river management plan for the portions of the Middle and South Forks of the Kings River and the North Fork of the Kern River, which have been designated by Congress as components of the national wild and scenic rivers system. The purpose of the river management plan is to provide direction and overall guidance on the management of lands and uses within the river corridors.

The environmental impact statement, which has been prepared in accordance with the National Environmental Policy Act, relates to both the general management plan and the comprehensive river management plan. The impacts of the alternatives on natural and cultural resources, wild and scenic rivers, backcountry / wilderness, transportation, visitor experiences, private land and special use permits within the parks, park management and operations, and the socioeconomic environment are assessed. The environmentally preferred alternative is also identified.

This *Draft General Management Plan and Comprehensive River Management Plan / Environmental Impact Statement* is presented in two volumes. The first volume includes the purpose of and need for action, plus the alternatives being considered and comparative tables of the alternatives and the impacts. The second volume includes the description of the affected environment, the environmental consequences, consultation and coordination, and the appendixes. For further information about this document contact:

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Comments must be received no later than 90 days after the publication of the notice of availability in the *Federal Register.* It is the National Park Service's practice to make comments, including names and addresses of respondents, available for public review. Individual respondents may request that their name and/or address be withheld from the public record, if it is stated prominently at the beginning of the comment. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be available for public inspection in their entirety. Anonymous comments may not be accepted.

Summary

Purpose of and Need for the Plans

This document presents five alternatives that are being considered for the management and use of Sequoia and Kings Canyon National Parks over the next 15–20 years. The purpose of the *Draft General Management Plan* is to provide management direction to establish and achieve a vision for what Sequoia and Kings Canyon National Parks should be, including desired future conditions for natural and cultural resources, as well as for visitor experiences.

This document also includes a comprehensive river management plan for the portions of the Middle and South Forks of the Kings River and the North Fork of the Kern River, which have been designated by Congress as components of the national wild and scenic rivers system. The purpose of the river management plan is to provide direction and overall guidance on the management of lands and uses within the river corridors. In accordance with the legislation, no development or use of park lands that is inconsistent with wild and scenic river designation may be undertaken.

The environmental impact statement, which has been prepared in accordance with the National Environmental Policy Act (NEPA), relates to both the general management plan and the comprehensive river management plan. The impacts of the alternatives on natural and cultural resources, wild and scenic rivers, wilderness, transportation, visitor experiences, private inholdings and special use permits within the parks, park management and operations, and the socioeconomic environment are assessed. The environmentally preferred alternative is also identified.

Issues, Concerns, and Problems

The need for the plans is to address issues, concerns, and problems related to the management of the national parks. The following are among the reasons why the plans are needed:

- *Lack of a Comprehensive River Management Plan* — Boundaries must be established for the river corridors, and appropriate classifications must be identified for each segment. For rivers that are eligible for the wild and scenic rivers system, no actions may be taken that could adversely affect the values that qualify them for inclusion in the system.
- *An Outdated Master Plan* — The 1971 *Master Plan* for Sequoia and Kings Canyon National Parks does not meet the requirements of a general management plan, and it was developed without public involvement. Some actions are no longer appropriate.
- *Management of Cultural Resources* — Since the 1971 *Master Plan* was completed, a number of historic structures, districts, and landscapes have been identified and inventoried. The general management plan must decide what should be done to properly care for a cultural resource, and how cultural resources fit into the overall scheme of park management. While the National Park Service strives to preserve and protect cultural resources whenever possible, funding and staffing are insufficient to preserve and protect all cultural resources in the parks.
- *Unresolved Issues for Specific Developed Areas* — Previous proposals may no longer be desirable. For example, a 1980 proposal to develop a 1,700-car parking garage at Wolverton to accommodate visitors to Giant Forest needs to be reexamined.
- *Special Use Permits on Public Land in Mineral King* — In the Mineral King area of Sequoia National Park private cabins are allowed on public land through special use permits dating from 1978. While these permits were to last only for the life of the original permittee, some permittees or their families would like to continue the use of their cabins.

- *The Changing Context of the Parks in the Regional Ecosystem* — Sequoia and Kings Canyon National Parks were originally set aside to protect the sequoia groves. Adjacent lands possessing national park character have been added to the parks over the years. Yet nearby land uses continue to affect park ecosystems.

The Context for the Plans

The alternatives being considered present a management vision and direction for Sequoia and Kings Canyon National Parks, but some considered actions could require legislative action by Congress. For example, the designation of additional wild and scenic rivers would require legislation.

The context is also affected by activities occurring outside the parks. For example, Giant Sequoia National Monument was established in 2000, thus increasing the protection of giant sequoia groves. Also, adjacent areas have been designated as wilderness. While the monument and adjacent wilderness areas are administered by the U.S. Forest Service, the decisions made for this general management plan will affect resources throughout the region, just as decisions made by other governmental agencies will affect the management of Sequoia and Kings Canyon National Parks.

On a broader scale, the Sierra Nevada Ecosystem Project (SNEP) has identified five factors that are affecting the long-term health of the ecosystem and that could drastically alter it (SNEP 1996).

- loss of pre-Euroamerican fire regimes
- introduced species
- air pollution
- habitat fragmentation
- rapid anthropogenic climatic change

While these ecosystem stressors are beyond the ability of any single governmental agency to control, they should be considered as decisions are made that will not only protect park resources and values but also contribute to the protection and health of the ecosystem.

THE ALTERNATIVES

Management Prescriptions

Management prescriptions are the heart of the general management plan. They are guidelines for achieving desired future conditions for both resources and visitor experiences, and they are based on public ideas presented in the scoping phases of this planning effort.

Management prescriptions are applied to geographic areas, which are referred to as zones. The size of each zone varies by alternative. Management prescriptions generally illustrate carrying capacity at a level appropriate for a conceptual general management plan. Some decisions about how management prescriptions will be implemented, however, are left to the alternatives (for example, how much stock use would be allowed throughout the parks or the amount of backcountry).

For the frontcountry there are four prescriptions:

- *Low-use frontcountry* — Natural areas that provide resource-based experiences that are self-directed and include personal discovery and interaction. Examples: the Redwood Saddle and Mineral King backroads; primitive campgrounds (the Atwell Mill and South Fork campgrounds); low-use frontcountry areas (Mineral King).
- *High-use frontcountry* — Natural areas with trails, roads, or recreational and educational opportunities that draw many day visitors because of the quality of the resources and easy access. Examples: Tokopah Falls trail (non-wilderness part), Big Stump, General Grant Tree, Moro Rock, Crystal Cave.

Elements Common to All Management Prescriptions

Certain elements are common to all the management prescriptions, as listed below:

- *Giant Sequoia Groves* — The giant sequoia groves — particularly Giant Forest — and the ecosystems they occupy are restored, maintained, and protected.
- *River Protection Measures* — Wild and scenic river resources and outstandingly remarkable values are protected through a number of measures and management tools. Rivers in frontcountry areas (classified as "recreational") are protected by seasonal closures; zoning; limiting areas of development; managing overnight use by limiting the number of developed campsites, parking spaces, and lodging rooms; establishing development setbacks; removing facilities within floodplains; managing river-based recreation; defining river access points; prohibiting motorized watercraft; and regular inspection of the condition of resources, including the river's outstandingly remarkable values. The capacity of roads providing access to recreational rivers is not expected to increase. Rivers in backcountry or wilderness areas (classified as "wild") are protected by zone prescriptions, permits, overnight wilderness quotas, limits on stock party sizes, restrictions on use areas, and area closures. For both wild and recreational rivers, riverbanks would be restored as needed.
- *Light Pollution* —The night sky or natural dark is protected from light pollution to the extent possible.
- *Protection of Natural Sounds* — Opportunities are preserved in the parks for visitors to enjoy natural sounds, including quiet, to the extent possible.
- *Cultural Resources* — Archeological resources, historic structures, and cultural landscapes are inventoried, evaluated, protected, and preserved unless it is determined through environmental analysis and consultations with the California state historic preservation officer, Native American tribes, and other parties that either disturbance is unavoidable or natural deterioration is appropriate. If resources must be disturbed, techniques to adequately mitigate impacts are taken beforehand. The parks continue to consult with affiliated American Indian tribes to identify ethnographic resources in order to develop and accomplish programs in a way that respects the beliefs, traditions, and other cultural values of the Indians who have ancestral ties to park lands. Museum collections are inventoried, accessioned, and protected according to NPS standards.
- *Architectural and Site Character* — Public facilities in all zones comply with the parks' guidelines for architectural design, lighting, and road character. The intent of the guidelines is to maintain rustic park architecture and character.
- *Accessibility for All Visitors* — New and remodeled federal and concession buildings and outdoor developed areas (e.g., campgrounds, trails, park attractions) are made accessible to all visitors, including those with disabilities, to the extent required by federal standards.
- *Sustainability* — New and remodeled buildings and facilities, as well as adaptively reused historic facilities, reflect the National Park Service's commitment to energy and resource conservation by their energy efficiency and durability.
- *Commercial Services* — Authorized commercial services are offered in parks to make available high-quality and safe visitor experiences while protecting and maintaining the desired resource conditions in each zone. Commercial services could include various types of lodging, camping, food service or restaurants, stores, public showers, laundry facilities, transportation, gas stations, stock rides (horses or mules), and pack stations.

  Concession permits or incidental business permits also provide visitor services; they need only be "appropriate" in order to be authorized. Typically these permits are for guided backcountry activities, such as pack stock, cross-country skiing, or fishing trips.
- *Utilities* — Utilities are limited to those determined to be necessary and appropriate for each site.

- *Park development* (development types should not overlap)
  - *Villages* — Areas that provide concentrated visitor services (e.g., visitor centers, lodging, restaurants / informal food service, stores, and equipment rentals). Examples: Wuksachi, Grant Grove, and Cedar Grove villages.
  - *Campgrounds with amenities* — Large frontcountry campgrounds, often near villages. Diverse camping opportunities are offered, including car or RV camping and various amenities. Examples: Campgrounds at Cedar Grove, Grant Grove, Dorst, and Lodgepole.
  - *Park operation areas* — Areas with concentrated facilities for administration, maintenance, and utilities, and occasionally for visitor use. Examples: the Ash Mountain headquarters area, the Grant Grove maintenance area, the Wolverton water treatment plant.
  - *Residential areas* — Seasonal or year-round housing areas for government, contractor, and concession staff, as well as privately owned or permitted recreational housing or inholdings. Examples: Inholdings with private recreation dwellings (Wilsonia, Silver City, Oriole Lake); permit cabins (Cabin Cove near Mineral King); employee housing at Grant Grove or upper Ash Mountain.
- *High–use scenic driving* — Highways that provide sightseeing opportunities in areas of natural beauty, offer scenic views, and connect heavily visited park features and visitor service areas. Example: Generals Highway.

There are three backcountry prescriptions:

- *Major trails* — High-standard, regularly maintained, long-distance trails that access remote natural areas. They accommodate day use, are generally accessed from frontcountry trailheads, and are suitable for sustained heavy use. Examples: Pacific Crest Trail, John Muir Trail, High Sierra Trail, Rae Lakes Loop (Mist Falls/Paradise Valley), Mineral King lake basins.
- *Secondary trails* — Trails that access even more remote natural areas than major trails and that generally cannot sustain heavy use because of construction or inherent fragility of the resource through which they pass. Examples: Colby Pass–Kern Kaweah, Tehipite to the Pacific Crest Trail, Martha Lake north to the Pacific Crest Trail.
- *Cross-country areas* — Mostly remote, low-use areas where self-sustaining natural systems function largely untouched by humans. Examples: Rock Creek–Miter Basin, Dumbbell Basin.

Carrying Capacity

General management plans are required to identify and implement visitor carrying capacities for all areas of a park. The National Park Service defines visitor carrying capacity as the type and level of visitor use that can be accommodated while sustaining desired park resource conditions and visitor experiences consistent with the purposes of the park. At the general management plan level of decision-making, management prescriptions establish carrying capacities in terms of the desired resource conditions and visitor opportunities in both frontcountry and backcountry management zones.

Visions for the Management Alternatives

The alternatives are structured around a series of visions — an overall vision for the parks as a whole, and then specific visions for individual areas within the parks. The visions focus on what the parks and individual areas should be like at some time in the future. Management prescriptions are applied under each alternative consistent with the vision for a particular area.

The no-action alternative, a continuation of existing conditions and activities, is the baseline for comparing the other alternatives (it was originally alternative B when the alternatives were first presented to the public in the winter of

2000). The preferred alternative is the National Park Service's preferred approach for managing the parks in the future. Alternative A would emphasize natural ecosystems and biodiversity, with reduced use and development; alternative C would preserve the parks' traditional character and retain the feel of yesteryear, with guided growth; and alternative D would preserve the basic character of the parks and adapt to changing user groups.

The preferred alternative was developed following an initial assessment of the impacts of the preliminary alternatives. A decision-making process known as "Choosing by Advantages" (CBA) was used to bring maximum value to the process while making cost-effective decisions that would benefit national parks and the nation. The preferred alternative was selected for two major reasons: (1) it would bring additional benefits to the parks, and (2) it would be the most cost-effective. Benefits related to resource protection from other alternatives were added to the preferred alternative.

The visions for the preferred alternative are presented below. A parkwide vision is given, followed by visions for wild and scenic rivers, backcountry and wilderness management, and specific developed areas within the parks. The visions for the no-action alternative and the other three alternatives are then described, with an emphasis on the differences between the alternatives. The visions are worded in the present tense, indicating what the conditions are when the vision is achieved.

Preferred Alternative: Accommodate Sustainable Growth and Visitor Enjoyment, Protect Ecosystem Diversity, and Preserve Basic Character While Adapting to Changing User Groups

Parkwide. The parks' appeal is broadened to be more relevant to diverse user groups. Increased day use is accommodated, and overnight visitation is retained. The integrity of park resources is paramount. Stronger educational and outreach programs provide enjoyment and instill park conservation values. The basic character of park activities and the rustic architecture of facilities is retained so that the parks remain strikingly different from surrounding areas. Park administrative facilities are redesigned and may be relocated outside the parks. Park facilities accommodate sustainable growth. Stock use continues with appropriate management and monitoring.

Wild and Scenic Rivers. National wild and scenic rivers, as well as rivers that are being studied for designation, are preserved in free-flowing condition, and they and their immediate environments are protected for the benefit and enjoyment of present and future generations. In managing these rivers, the National Park Service must protect and enhance the "outstandingly remarkable values" of each river segment, and it may provide for other uses of the river area so

Management Prescriptions and the Alternatives

How much of the park area is managed under each prescription depends on the vision of a particular alternative. The following are the relative amounts of management zones under each alternative as compared to the no-action alternative.

- *No-Action Alternative* — **Backcountry** predominates with a mix of **low-** and **high-use frontcountry** along Generals Highway, with several areas of **park development**.
- *Preferred Alternative* — **Backcountry** predominates with slightly less **low-use frontcountry** and slightly more **high-use frontcountry** along Generals Highway, with several areas of **park development**.
- *Alternative A* — More **backcountry** and less **low-** and **high-use frontcountry** and **park development.**
- *Alternative C* — More **low-** and **high-use frontcountry,** slightly more **park development** and slightly less **backcountry.**
- *Alternative D* — More **low-** and **high-use frontcountry**, slightly more **park development** and less **backcountry**.

long as such use is not inconsistent with the protection and enhancement of outstandingly remarkable values and the public's use and enjoyment of the area. The protection of natural river processes is a high priority.

For rivers that are being considered for designation as wild and scenic rivers, no actions may be taken that could adversely affect the values that qualify a river for the national wild and scenic rivers system.

Management plans for the designated river segments need not specify detailed actions. River plans may instead prescribe management zoning, desired conditions, typical visitor activities and experiences, park facilities, and management activities allowed in the river corridors. Through these prescriptions the outstandingly remarkable values and the free-flowing condition of the river corridors are protected and enhanced. Appropriate levels of public use and enjoyment are also prescribed.

Backcountry. Up to approximately 96.10% of the parks are compatible with wilderness designation or management as wilderness (no wilderness proposals are included in this plan). Natural resource conditions in the parks' backcountry and wilderness areas are improved. Facilities are evaluated for usefulness and compatibility with wilderness, and additional facilities are considered only in the nonwilderness backcountry. Most stressors to the backcountry are region-wide, such as air pollution and climate change, rather than from activities within the parks.

Kings Canyon National Park. *Cedar Grove and the Floor of the Kings Canyon* — The Kings Canyon is a glacially carved, deep canyon with waterfalls, lush meadows, campgrounds, and commercial facilities, as well as popular backcountry access. The identity of the Kings Canyon is strengthened and enhanced, but the area remains less visited and quieter than Grant Grove or Giant Forest. Visitors come to see the canyon's special features. The basic character of camping and backcountry access remain. Cedar Grove village is made more efficient and offers a modestly greater variety of overnight accommodations. The area's season includes more spring and fall time.

Grant Grove — Grant Grove is a pristine sequoia grove with the world's third largest tree (the General Grant Tree) and the previously logged Big Stump Grove. The area continues as a very popular destination, with a highly visited sequoia grove. Grant Grove village offers day and overnight activities. Incompatible visitor and operational functions are separated. Facility development and use are limited to be consistent with sustainable water and sewer capacity. Circulation is redesigned and improved to reduce congestion.

Sequoia National Park. *Dorst / Halstead Meadow / Cabin Creek* — Dorst, Halstead Meadow, and Cabin Creek are within a forested area of open evergreen stands, meadows, and small sequoia groves. The Dorst area provides diverse camping opportunities and some facilities along the Generals Highway. It serves as the trailhead to Muir Grove.

Wuksachi — Wuksachi is a new developed area set amid rocky outcrops and surrounded by evergreen forest. Wuksachi village provides year-round facilities for lodging and food service, plus residential and park operations areas in accordance with the concession contract.

Lodgepole — Lodgepole lies within the beautiful Tokopah Canyon of the Marble Fork of the Kaweah River. The Tokopah Falls trail is a popular day hike. Lodgepole remains a very popular campground with amenities, the dominant day-use commercial site, a river recreation site, a wilderness trailhead, and a principal employee residential area. Lodgepole offers expanded day activities and services, while continuing to provide overnight camping. Incompatible park and visitor functions are separated.

Wolverton — Wolverton, a large, open meadow in a forested valley, provides the main day use staging area for Giant Forest shuttles, plus backcountry access; winter uses are expanded.

Giant Forest — The giant sequoia grove at Giant Forest remains Sequoia National Park's primary day use feature. The grove, site of a major restoration effort, illustrates the premiere, naturally functioning giant sequoia ecosystem, with 6 of the 10 largest trees in the world, meadows, and abundant wildlife. The desired visitor experience is a walk in the woods to see the Big Trees. Visitors focus on the Giant Forest museum / Big Trees Trail area, the General Sherman Tree, Moro Rock, and Crescent Meadow. The extensive trail system is retained. Private vehicular access to the grove is retained but is limited by parking capacities; during peak-use periods some roads and/or parking areas are closed and replaced by shuttle system access.

Crystal Cave — Crystal Cave provides the primary public opportunity to experience the parks' significant cave resources.

Ash Mountain / Foothills — The foothills of Sequoia National Park represent some of the best protected foothill wildlands in the Sierra Nevada, featuring blue oak woodlands, chaparral, riparian corridors, and abundant wildlife. Increased levels of recreational use are accommodated primarily along the Middle and North Forks of the Kaweah River. The Ash Mountain area is the parks' primary administrative and operations center, and the area continues to have some seasonal as well as permanent residences for essential personnel. A partnership is developed with the gateway community to meet park needs and to retain the character of a small, rural community.

Mineral King — Mineral King Valley represents an extraordinary and spectacular experience in the Sierra Nevada because of its unusual metamorphic geology and appearance. Mineral King Road continues to provide access to the alpine backcountry, public recreation, campgrounds, and the Silver City private cabins and resort. Qualities that made the road corridor eligible for listing on the National Register of Historic Places are maintained and preserved, while the road provides increased public recreational access to the alpine backcountry and historic resources. Slightly higher levels of public use are accommodated. As special use permits expire, permit cabins are acquired and adaptively reused for public purposes. (The National Park Service would partner with a nonprofit or commercial services organization to provide public lodging or other public use. A plan would be developed for public uses, including limited use by former permittees. The plan would address treatment methods to preserve the Mineral King Road Cultural Landscape District, sustainable use, code compliance, needed utilities, self-sustaining funding, maintenance, and potential hazardous materials mitigation. It would also develop a decision tree for management in case of a natural disaster.)

Dillonwood — Dillonwood, the previously logged sequoia grove that was added to Sequoia National Park in 2000, is protected, and modest use levels are accommodated. Dillonwood provides backcountry access through a sequoia grove. Day use is allowed. There are experiments with a variety of sequoia forest management techniques that are compatible with the NPS mission. (This is an interim vision pending site-specific planning.)

The Other Alternatives Considered

Parkwide Visions. Under the no-action alternative the parks are managed as they are now in accordance with approved plans (such as development concept plans, and the 1996 *Giant Forest Interim Management Plan);* negative resource impacts and visitor demands are responded to by relocating development, reducing some uses, or confining new developed areas. Visitor uses are reassessed and revised as new information emerges about natural and cultural resource impacts and visitor needs. Current facilities are inadequate for park needs and visitor use levels, and crowding is common in some areas. Stock use continues with some differences in appropriate management and monitoring under the no-action alternative and alternatives C and D; no stock use is allowed under alternative A.

Under alternative A the parks are natural resource preserves; they are primarily valued because they contain publicly owned resources that will be conserved for the future. Levels of use are lower than at present, and visitor experiences are more directly connected to natural resources and provide more solitude with less development. The parks strongly contrast with surrounding lands that are under increasing pressure for use and development. Park managers aggressively cooperate with the managers of surrounding lands to enhance range-wide biodiversity.

Alternative C preserves traditional park character and retains the feel of yesteryear, where experiences are more reminiscent of how visitors used the parks in the past. This is conveyed through rustic architecture, but not living history programs. The lower impact recreational activities popular from the 1920s to the 1960s are emphasized, providing a strikingly different experience from that in an urban setting. Redesigned developed areas accommodate limited growth; overnight stays are encouraged. Negative impacts on natural resources are controlled, so as to maintain or improve resource conditions.

Under alternative D the parks preserve some of their traditional character and rustic architecture, but diverse new user groups and uses are encouraged. Day use is more common. Facilities are expanded to meet users' needs, while frequent interpretive programs are offered to educate, entertain, and instill a sense of park conservation values. Negative impacts on natural resources are controlled or mitigated, so as to maintain or improve resource conditions.

Wild and Scenic Rivers. The vision for wild and scenic rivers is the same under all alternatives. Wild and scenic rivers, as well as rivers that are being studied for designation, are preserved in free-flowing condition, and they and their immediate environments are protected for the benefit and enjoyment of present and future generations. In managing these rivers, primary emphasis is given to protecting the outstandingly remarkable values of each river segment, including their aesthetic, scenic, historic, archeological, and scientific features. The protection of natural river processes is a high priority.

Backcountry. Under the no-action alternative over 83% of the parks are designated wilderness; these and additional areas are managed as wilderness. Under alternative A up to 96.11% of the parks are compatible with wilderness designation and/or management as wilderness. Slightly less area under alternative C (96.09%) is compatible with wilderness designation and management, while under alternative D the area would decrease to 89.37% of the parks. No wilderness proposals are included in this plan. Under all alternatives natural resource conditions in the parks' backcountry and wilderness areas are improved, but under alternatives C and D improvements only happen in some areas.

Under the no-action alternative the parks' backcountry and wilderness areas continue to have a variety of permitted activities and commercial operations. Existing facilities remain. Under alternative A visitor use is reduced from the present; social conflicts are reduced while there are more opportunities for solitude; high-impact activities are eliminated (e.g., no campfires); and facilities are removed where feasible. Under alternative C party sizes and use levels are limited and dispersed, reducing the need for onsite regulation. Most commercial and park facilities remain. Under alternative D party sizes and use levels are higher than under alternative C, with higher levels of onsite regulation. Uses are separated and may be concentrated in high-use areas. Additional facilities may be added in the nonwilderness backcountry if needed.

Kings Canyon National Park. *Cedar Grove and the Floor of the Kings Canyon* — Under the no-action alternative and alternative A, the Kings Canyon is visited mostly by campers and hikers who come to enjoy the area's quiet or by persons passing through to access the backcountry. Under alternative C the identity of the Kings Canyon is strengthened and enhanced, but the area remains less visited and quieter than Grant Grove or Giant Forest. Under alternative D the Kings Canyon becomes a major park fea-

ture equal to Grant Grove or Giant Forest, with visitors drawn by the area's strong identity as the "quiet Yosemite." In all alternatives backcountry access remains an important function. The area's season is lengthened into the spring and fall. Visitors come to see the canyon's special features. The traditional character of camping and backcountry access remain.

Cedar Grove village is a low-use area with an extended season under the no-action alternative. Under alternative A there is a focus on resource preservation, facilities at Cedar Grove village are reduced in number, and visitation is less than at present. Under alternative C the village is enlarged slightly and offers a greater variety of overnight accommodations. The area's season is lengthened to include more spring and fall time. Under alternative D the village is expanded to provide improved opportunities for more camping and lodging.

Grant Grove — Grant Grove continues as a very popular destination under the no-action alternative, with a highly visited sequoia grove. Grant Grove village offers day and overnight activities, mixed with other park development and uses. Circulation and congestion problems remain. Under alternatives A, C, and D Grant Grove continues as a popular destination, with visitation to the sequoia grove possibly increasing under alternatives C and D. Under alternative A more of the area is returned to natural conditions, with fewer commercial facilities. Under alternative C, however, Grant Grove village becomes a large destination village, with facilities redesigned for more day and overnight use and improved circulation. Under alternative D Grant Grove village is expanded, with more facilities for day and overnight use. Under alternatives C and D overlapping and incompatible uses are separated. Circulation and congestion problems are addressed under both alternatives, with new facilities provided under alternative D.

Sequoia National Park. *Dorst / Halstead Meadow / Cabin Creek* — The Dorst area provides camping and some facilities along the Generals Highway under the no-action alternative and alternatives C and D, and it serves as the trailhead to Muir Grove. Under alternative A the Dorst area provides less frontcountry camping; resource conditions and visitor experiences are improved. Under alternative D more opportunities are provided for visitors.

Wuksachi — Wuksachi village provides year-round facilities for lodging and food service, plus residential and park operations areas in accordance with the concession contract. Under alternative D Wuksachi village is expanded to provide diverse day and overnight uses, including picnic areas, trails, a traditional mix of overnight facilities (lodges and cabins), and food service, as well as areas for residential purposes and park operations.

Lodgepole — Lodgepole is a very popular campground with amenities, the dominant day-use commercial site, a river recreation site, a wilderness trailhead, and a principal employee residential area, all near one another. Under alternative A Lodgepole provides reduced levels of day use and campgrounds that are separated from operations. Under alternative C Lodgepole is redesigned and expanded, with an emphasis on overnight use; day uses are relocated to other areas. Under alternative D expanded day activities and services are offered at Lodgepole, while overnight camping continues to be provided. Under alternatives C and D incompatible uses are separated.

Wolverton — Under all alternatives Wolverton provides summer picnicking, winter activities, day-hiking trails, and a backcountry trailhead. It is the main day use staging area for Giant Forest shuttles. It also functions as a summer and winter trailhead. Under alternatives C and D backcountry access and winter uses are expanded.

Giant Forest — The vision for the Giant Forest area is the same under all the alternatives. It remains Sequoia National Park's primary day use feature. The desired visitor experience is a walk in the woods to see the Big Trees. Visitors focus on the Giant Forest museum / Big Trees Trail area, the General Sherman Tree, Moro Rock, and Crescent Meadow. The extensive trail

system is retained. Private vehicular access to the grove is retained but is limited by parking capacities; during peak-use periods some roads and/or parking areas are closed and replaced by shuttle system access.

Crystal Cave — Crystal Cave provides the primary public opportunity to experience the parks' significant cave resources. Under alternative D additional types of tours are offered to provide for diverse visitor experiences.

Ash Mountain / Foothills — Under the no-action alternative the foothills accommodate low levels of year-round visitor use. Under alternative A the foothills area has improved resource conditions, and limited levels of recreational use are accommodated primarily along the Middle Fork of the Kaweah River. Under alternatives C and D increased levels of recreational use are accommodated along the Middle and North Forks of the Kaweah River. The Ash Mountain area remains the parks' primary administrative and operations center under the no-action alternative and alternatives C and D, and the area continues to have some seasonal as well as permanent residences. Under alternative A park operations and residential areas are relocated outside the park.

Mineral King — Mineral King Road continues to provide access to recreational cabins, a small resort, campgrounds, and the alpine backcountry under the no-action alternative. Low levels of visitor services and activities are accommodated along the corridor. Special use permit cabins are removed in accordance with legislation to provide more area for public recreation. Under alternative A lower levels of visitor services and activities are accommodated along the corridor. Special use permits for cabins are terminated in accordance with legislation; the cabins are removed, and the sites are returned to natural conditions.

Under alternatives C and D Mineral King Road continues to provide access to recreational cabins, a small resort, and the alpine backcountry. Under both alternatives the qualities that made the road corridor eligible for listing on the national register are maintained and preserved. But under alternative D slightly higher levels of public use are accommodated. Under alternative C special use permit cabins are preserved to exemplify a recreation community in Sequoia National Park. Under alternative D, selected special use permit cabins are acquired and preserved for interpretation and educational use.

Dillonwood — The vision for Dillonwood under all alternatives is an interim vision pending site-specific planning. Under the no-action alternative Dillonwood is open to pedestrian use. Under alternative A the sequoia grove at Dillonwood is protected, and low use levels are accommodated. Under alternatives C and D Dillonwood provides primitive camping facilities and backcountry access within a sequoia grove. In addition under alternative D, a group education primitive area is provided, and day use exploration is allowed. Under all alternatives there are experiments with a variety of sequoia forest management techniques.

Environmental Consequences

The potential effects of the five alternatives are analyzed for natural resources, wild and scenic rivers, backcountry (including wilderness), cultural resources, transportation, visitor experiences, land uses (private land and special use permits), park operations, and the socio-economic environment (see the text box on the next page for specific topics). The analysis is the basis for comparing the advantages and disadvantages of the alternatives. Impacts are described in terms of whether they are negligible, minor, moderate, or major, and how long they would last.

Cumulative Impacts

Cumulative impacts on the environment result from the incremental (i.e., additive) impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of who undertakes such actions. Cumulative

Impact Topics Considered in This Environmental Impact Statement		
The environmental impact statement analyzes the following impact topics, based on the major values or issues identified in the planning process, as well as applicable laws and executive orders. **Natural Resource Topics*** • Cave resources • Water resources, including hydrology, water quality, and floodplains • Vegetation and soils, including general vegetation, sequoia groves, and meadow, riparian, and aquatic communities • Wildlife and wildlife habitat • Threatened, endangered, and sensitive species • Air quality **Wild and Scenic Rivers** • Effects of the alternatives on wild and scenic rivers **Backcountry / Wilderness** • Effects of the alternatives on backcountry or wilderness management	**Cultural Resource Topics*** • Historic structures, districts, and cultural landscapes • Archeological resources • Ethnographic resources and landscapes • Museum collections and archives **Transportation** • Effects of transportation-related actions on visitor experiences **Visitor Experience** • Park character • Visitation • Educational opportunities (including educational facilities, programs, and outreach) • Recreational opportunities (including opportunities to experience a full range of park resources, opportunities for traditional recreational experiences, opportunities for nontraditional or new recreational experiences, and opportunities for stock use) • Visitor services (including overnight lodging, camping opportunities, and other facilities and services)	**Land Use: Private Land and Special Use Permits** • Privately owned lands within the parks (inholdings) • Special use permits • Boundary adjustments **Park Management, Operations, and Facilities** • Staffing, infrastructure, visitor facilities, and services • Operations of non-NPS entities, including the Sequoia Natural History Association, concessioners, commercial permittees, partners, and volunteers • Other federal agencies **Socioeconomic Environment** • Local and regional economies • Special use permits and inholdings • Park concessioners • Park staffing and budget

* Topics requiring a finding related to impairment.

impacts can result from individually minor but collectively major actions over a period of time.

For this planning effort, actions within the parks or by others that have occurred within the region or would occur in the foreseeable future were identified. For natural resources, findings from the Sierra Nevada Ecosystem Project were used to provide the overall regional context for cumulative effects. Specific actions that could affect natural resources within the parks and in their vicinity were also considered. For example, air quality impacts affecting the parks result primarily from actions throughout the entire airshed, so the cumulative impact area for this topic is the airshed including the San Joaquin Valley.

Impairment of Park Resources or Values

The National Park Service is prohibited from impairing park resources and values by the National Park Service Organic Act. An impair-

ment is an impact to a natural or cultural resource in the parks that "would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values" (NPS *Management Policies 2001,* sec. 1.4.5).

The determination of impairment is closely tied to the outcome of the natural and cultural resource impact analysis. This determination is also made with a parallel consideration of the park's legislative mandates (purpose and significance), and resource management objectives as defined in relevant park plans. Impairment would be a major adverse impact from actions taken inside the parks.

The impact analysis for this document shows that no park values or resources would be impaired by actions considered under any alternative.

Summary of Impacts and the Environmentally Preferred Alternative

The following discussion summarizes impacts of all alternatives considered, in accordance with the National Environmental Policy Act. The alternatives were also analyzed in terms of the goals of the National Environmental Policy Act. After the environmental consequences of the alternatives were analyzed, each alternative was evaluated as to how well it met these goals. The preferred alternative, which was developed by using the Choosing by Advantages process as a way to ensure the consideration of environmental goals, was determined to be the environmentally preferred alternative.

Impacts of the Preferred Alternative

Natural Resource Impacts. Natural resource conditions would improve under the preferred alternative as a result of more sustainable development and removing development from sequoia groves, resulting in minor to major, beneficial, long-term impacts both parkwide and in specific areas. Over time air quality under this alternative would improve as a result of lower vehicle emissions and use of transit; however, the cumulative impacts of poor regional air quality would continue to be major, adverse, and long term despite improved air quality as a result of this alternative.

Impacts on Wild and Scenic Rivers. The wild and scenic river plan would generally result in minor to moderate, beneficial, long-term impacts on designated and suitable river sections. Outstandingly remarkable values would be protected. Removing facilities associated with hydroelectric generation, in accordance with the terms of the permit that allowed the facilities, would restore free-flowing conditions to rivers, a moderate, beneficial impact.

Impacts on Backcountry and Wilderness. While 83.5% of the parks have been designated wilderness, up to 96.10% would be compatible with management as wilderness, resulting over the long term in negligible to minor, beneficial impacts on wilderness recreational opportunities and values. Potentially establishing an additional high Sierra camp in the Hockett Plateau backcountry would have a negligible, adverse, long-term impact.

Cultural Resource Impacts. Identifying, inventorying, evaluating, preserving, and interpreting cultural resources would result in minor, beneficial, long-term impacts. Removing hydroelectric facilities within the parks, in accordance with the terms of the permit that allowed the facilities, would result in moderate to major, adverse, permanent impacts; mitigation of adverse effects would include documentation to standards of the Historic American Buildings Survey, the Historic American Engineering Record, and the Historic American Landscapes Survey (HABS/HAER/ HALS). (Hydroelectric facilities are a special permitted use that is not related to the parks' purpose and significance.) Preserving and adaptively reusing resources contributing to the significance of the Mineral King Road Cultural Landscape District would have minor to moderate, beneficial, long-term impacts.

Transportation Impacts. Transit, road, and parking improvements would facilitate carrying capacity of the parks and reduce seasonal congestion, resulting in major, long-term, beneficial impacts in several areas.

Visitor Experience Impacts. Improving popular visitor areas and trails, as well as educational and recreational opportunities, and updating facilities would result in major, beneficial visitor experience impacts over the long term.

Impacts on Private Land and Special Use Permits. The preferred alternative would result in major, beneficial, long-term impacts because public use of public land would be increased by removing non-public uses, acquiring and adaptively using special use permit cabins for public use, and acquiring a limited amount of private land in and around the parks to increase public access. Private use of private land would generally be allowed to continue.

Impacts on Park Management and Socio-economic Impacts. Park operations would be improved as facilities and infrastructure were updated to be more sustainable and some facilities were relocated outside the parks, resulting in minor to moderate, beneficial impacts over the long term. Additional staffing and more housing in the surrounding community would have minor to moderate beneficial impacts on the local economy. Approved concession and other projects would be implemented in phases, resulting in moderate to major, short-term impacts on the local economy.

Impacts of the Other Alternatives Considered

Natural Resource Impacts. Under the no-action alternative there would continue to be localized, minor to moderate, adverse, long-term impacts on some natural resources. Under alternative A natural resource conditions would improve as the result of less visitation, use limits, reduced development, and no development in sequoia groves, resulting in minor to major, beneficial impacts over the long term, both parkwide and in specific areas.

Development under alternatives C and D would have minor to moderate, adverse impacts on natural resources during construction. Under both alternatives some natural resources would continue to sustain localized minor to moderate, adverse impacts over the long term.

Under all the alternatives air quality would improve because of lower vehicle emissions; however, regional air quality would continue to be subject to major, adverse, long-term impacts.

Impacts on Wild and Scenic Rivers. Under the no-action alternative and alternatives C and D, impacts on wild and scenic river segments would generally be negligible to minor and beneficial over the long term.

Under all alternatives except C water diversions for hydroelectric power generation would be removed, and free-flowing conditions would be restored, as described for the preferred alternative. Under alternative C water diversions would continue to have a minor adverse impact, but these relatively small-scale facilities do not preclude the inclusion of the affected river segments in the wild and scenic rivers system because the waterways remain "generally natural and riverine in appearance."

Impacts on Backcountry / Wilderness. While 83.5% of the parks have been designated wilderness, 96.10% under the no-action alternative would continue to be compatible with wilderness management and would be managed to preserve wilderness characteristics, resulting in negligible, beneficial, long-term impacts on wilderness recreational opportunities and values. Impacts would be similar under the other alternatives, except up to 96.11% of the parks would be compatible with management as wilderness under alternative A, 96.09% under alternative C, and 89.37% under alternative D.

Under alternative D additional areas would be managed as non-wilderness backcountry, allowing the consideration of an additional high

Sierra camp in the Hockett Plateau backcountry (similar to the preferred alternative), resulting in a minor, adverse impact on wilderness recreational opportunities and values.

Cultural Resource Impacts. Identifying, inventorying, evaluating, preserving, and interpreting cultural resources under the no-action alternative and alternatives C and D would result in minor, long-term, beneficial impacts. Under alternative A the loss of cultural resources would result in moderate to major, adverse, permanent impacts. The removal of hydroelectric facilities, in accordance with the terms of the permit that allowed the facilities, under all alternatives except C would result in moderate to major, adverse, permanent impacts. Under alternative C hydroelectric facilities would be preserved, with minor, beneficial, long-term impacts.

Transportation Impacts. While severe seasonal congestion would continue as a major, adverse, long-term impact in several park areas under the no-action alternative, the use of a transportation system at Giant Forest under all alternatives would somewhat increase the visitor carrying capacity in this area. Use limits under alternative A would result in a reduced carrying capacity, with major, adverse, long-term impacts on visitation.

Under alternative C the parks' carrying capacity would be somewhat increased, and seasonal congestion would be addressed with transit, as well as some road and parking revisions, resulting in moderate, beneficial impacts in several park areas. The use of transportation systems would be explored throughout the parks.

Under alternative D the parks' carrying capacity would be further increased, and seasonal congestion would be addressed by means of transit throughout the parks, a major road bypass, a multi-story parking garage at Wolverton, and road and parking improvements, resulting in major, beneficial, long-term impacts in several park areas.

Visitor Experience Impacts. Under the no-action alternative popular visitor areas and trails would remain crowded and educational opportunities would be limited. The gradual improvement of facilities would result in minor to moderate, beneficial impacts on visitor experiences over the long term.

Under alternative A reducing the amount of visitor facilities and trails would improve local conditions, resulting in minor to moderate, long-term, beneficial impacts on visitor experiences for those visitors able to enter the parks. Educational outreach would be increased, resulting in some minor, beneficial impacts locally.

Under alternative C popular visitor areas and trails would be improved or expanded, as would traditional ranger naturalist educational programs. Also, traditional recreational opportunities would be provided, and facilities would be updated, resulting in moderate, beneficial, long-term impacts on visitors.

Under alternative D popular visitor areas and trails would be improved, educational and recreational opportunities enhanced, and facilities updated, resulting in major, beneficial, long-term visitor experience impacts.

Impacts on Private Land and Special Use Permits. Under the no-action alternative and alternatives C and D, private land within the parks would continue subject to updated land protection plans; impacts would generally be minor, beneficial, and long term for private landowners, with negligible, adverse impacts on public use. Removing hydroelectric facilities under the no-action alternative and alternatives A and D would have negligible to minor, adverse, long-term impacts on the special permit holder. The Boy Scout camp would continue under the no-action alternative, with negligible, long-term, adverse impacts on public use of public land.

Under alternative A acquiring private lands within the parks would result in moderate, beneficial impacts in terms of public use, but adverse impacts on private landowners.

Under the no-action alternative and alternative A special use permit cabins would be eventually removed and areas returned to natural conditions, resulting in major, beneficial, long-term impacts on public use of public land. Under alternative C Congress could authorize Mineral King cabin special use permits to continue, resulting in major, adverse, long-term impacts to public use of public land. Under alternative D, similar to the preferred alternative, permits would not be extended; however, only selected example of permit cabins would be retained for interpretation and educational use, resulting in major, beneficial, long-term impacts on public use of public land.

Impacts on Park Management and Socioeconomic Impacts. Under all the alternatives park operations would be gradually improved as facilities and infrastructure were updated and made more sustainable. Also, impacts on park operations from the assistance of other groups — the natural history association, volunteers, concessioners, commercial permit or incidental business permit holders, and partners — would be minor to major and beneficial.

Under the no-action alternative impacts on park operations due to an aging infrastructure, inadequate housing, and insufficient staffing would be minor to moderate and adverse over the long term.

Under alternative A eliminating the use of stock, helicopters, and snowmobiles would have major, adverse impacts on park operations even as facilities were updated to be more sustainable and some facilities were relocated outside the parks. Fewer facilities in the parks could result in moderate beneficial impacts on the local economy to the extent that facilities were provided outside the parks by private entrepreneurs.

Under alternatives C and D additional staffing and more housing in adjacent communities would have minor impacts on the local economy, with the largest staffing increase under alternative D.

Under all the alternatives approved concession and other projects would be implemented in phases, resulting in moderate to major, short-term impacts on individual businesses, but negligible impacts regionwide.

Contents: Volume 1

PURPOSE OF AND NEED FOR THE PLANS

ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

Maps

Tables

An Overview of this Document

This *Draft General Management Plan and Comprehensive River Management Plan / Environmental Impact Statement* is presented in two volumes. Volume 1 includes the following:

The Purpose of and the Need for the Plans — This part explains why the plans are being done; guidance for planning in terms of (1) the purpose and significance of the parks; (2) legislation, executive orders, and policies that affect the management of Sequoia and Kings Canyon National Parks, and (3) public input on the planning process that has been received through meetings and comments on planning newsletters and a workbook. The values and tradeoffs that are being considered in this planning process, and the decisions that need to be made, are also discussed. Finally, how this document relates to other planning efforts and documents is delineated.

The Alternatives, Including the Preferred Alternative — The second part describes management prescriptions for the parks, the alternatives that are being considered (including the preferred alternative, which is the National Park Service's proposed action), mitigating measures included in the alternatives, and a summary of the environmental impacts. The alternatives are programmatic in terms of providing visions for the long-term management of the parks, as well as specific areas within the parks, but they also propose actions related to achieving a particular vision or management prescription. Because the majority of the parks are designated wilderness or managed as wilderness, a more detailed backcountry and wilderness management plan is being prepared separately.

Together, these two parts provide the information that is needed to compare the alternatives and their impacts, to decide how well each alternative would meet the mission of the parks, which is "to protect forever the greater Sierran ecosystem — including the sequoia groves and high Sierra regions of the parks — and its natural evolution, and to provide appropriate opportunities to present and future generations to experience and understand park resources and values." The sections of the *Comprehensive River Management Plan* are incorporated throughout the first two parts and are clearly identified by headings.

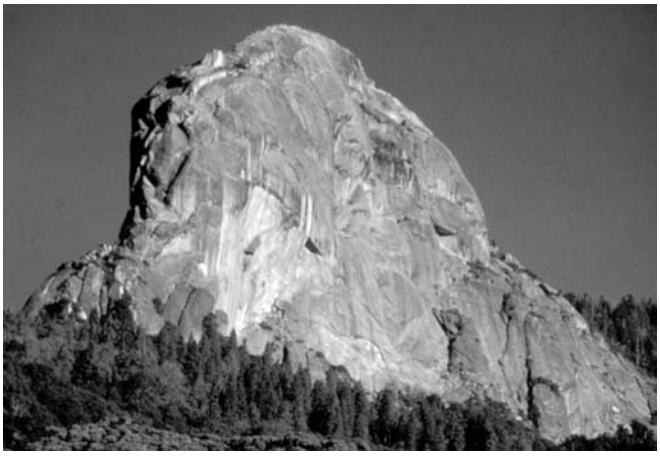
Volume 2 constitutes the analytical part of the environmental impact statement and consists of the following parts:

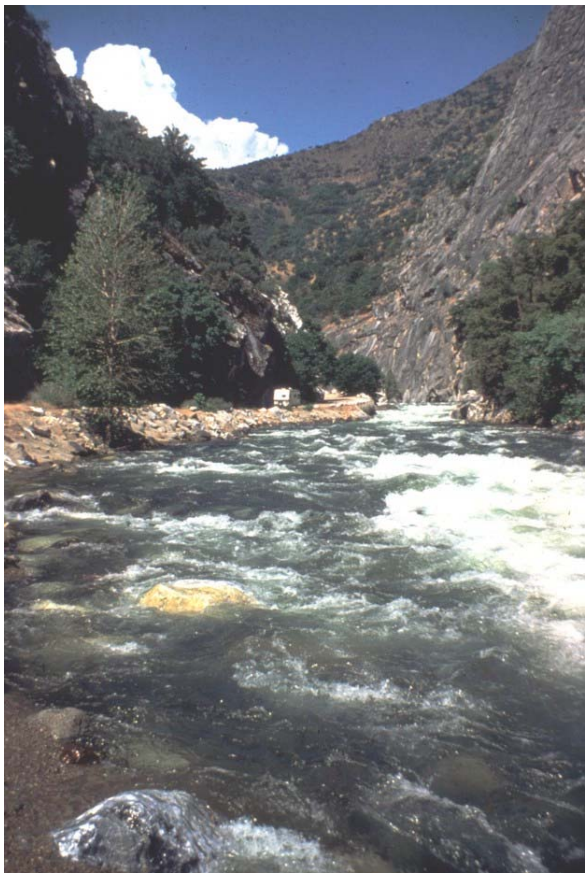
The Affected Environment — This part describes the environment of the parks, with emphasis on those aspects that would be affected by implementing any of the alternative actions that are being considered. Natural resources, wild and scenic rivers, backcountry and wilderness, cultural resources, visitor use, land uses within the parks, park operations, and the socio-economic environment are discussed.

Environmental Consequences — The fourth part describes the impacts or effects of implementing the proposed actions on the affected environment. For each impact topic, the context, duration, and intensity of the impacts are analyzed. As a result of this analysis, a decision is made as to whether a specific action would leave a natural and cultural resource "unimpaired for the enjoyment of future generations."

The remainder of the document includes "Consultation and Coordination," a description of the process that was used to develop the preferred alternative, appendixes that include backup material for the planning process and the analysis of environmental impacts, a glossary, a selected bibliography, and an index of general terms.

Purpose of and Need for the Plans





Overview

This document presents the alternatives that are being considered for a general management plan for Sequoia and Kings Canyon National Parks. This document also includes a comprehensive management plan for the portions of the Middle and South Forks of the Kings River and the North Fork of the Kern River, which have been designated by Congress as components of the national wild and scenic rivers system.

This document has been prepared in accordance with the National Environmental Policy Act (NEPA), including an analysis of the impacts of the alternatives. Impacts are analyzed for natural and cultural resources, wild and scenic rivers, backcountry and wilderness, transportation, visitor experiences, private land and special use permits within the parks, park management and operations, and the socioeconomic environment. The environmentally preferred alternative is also identified.

PURPOSE OF THE PLANS

Draft General Management Plan

The purpose of the *Draft General Management Plan* is to establish a vision for what Sequoia and Kings Canyon National Parks should be, including desired future conditions for natural and cultural resources, as well as for visitor experiences. Four alternatives, plus the preferred alternative (the National Park Service's proposed action), are presented for management and use over the next 15–20 years. The alternatives have been developed based on input from interested and affected publics. The document also identifies other action plans that will be needed to implement approved actions in order to achieve the visions and goals established in this document.

Wild and Scenic Rivers Comprehensive Management Plan

In 1987 Congress designated portions of the Kings River and the North Fork of the Kern River as wild and scenic rivers to protect the their free-flowing condition and to protect and enhance the outstandingly remarkable values of the river corridors. The extent of river corridors within the parks include 61.2 miles of the Middle and South Forks of the Kings River and 28.9 miles of the North Fork of the Kern River.

The Wild and Scenic Rivers Act requires the preparation of a comprehensive management plan for each river segment to provide for the protection of the river values. The plan must address resource protection, development of lands and facilities, user capacities, and other necessary or desirable management practices to meet the purposes of the act.

The purpose of the *Comprehensive River Management Plan* for the Middle and South Forks of the Kings River and the North Fork of the Kern River is to provide direction and overall guidance on the management of lands and uses within the river corridors. As stated in the 1987 legislation that added these rivers to the wild and scenic rivers system, the management plan "shall assure that no development or use of park lands shall be undertaken that is inconsistent with the designation" (16 USC 1274(a)(63) and (64)).

NEED FOR THE PLANS

The need for the plans is to address issues, concerns, and problems related to the management of the national parks. The following are among the reasons why updated plans are needed; general management plan issues are more fully discussed in "Decision Points," beginning on page 20.

Lack of a Comprehensive River Management Plan. In adding the segments of the Middle and South Forks of the Kings River within Kings Canyon National Park and the North Fork of the Kern River in Sequoia National Park to the wild and scenic rivers system, Congress directed the National Park Service to revise the general management plan for these parks to recognize these designations, to establish boundaries, and to identify the appropriate classifications for each segment. The Wild and Scenic Rivers Act also requires agencies to prepare comprehensive management plans for all rivers in the wild and scenic rivers system.

An Outdated *Master Plan.* The 1971 *Master Plan* for Sequoia and Kings Canyon National Parks is outdated and was prepared without public involvement. The 1971 plan also predated a major boundary expansion, the 1978 addition of the Mineral King Game Refuge (a portion of Sequoia National Forest). The National Park Service now uses general management plans to set goals for desired resource conditions and visitor experiences in parks. The plan is needed to make major decisions related to the kinds and levels of visitor uses and support facilities, park carrying capacity and appropriate access, private uses and public access, and the appropriate level of focus on cultural resources. These decision points involve numerous park, visitor, and community values.

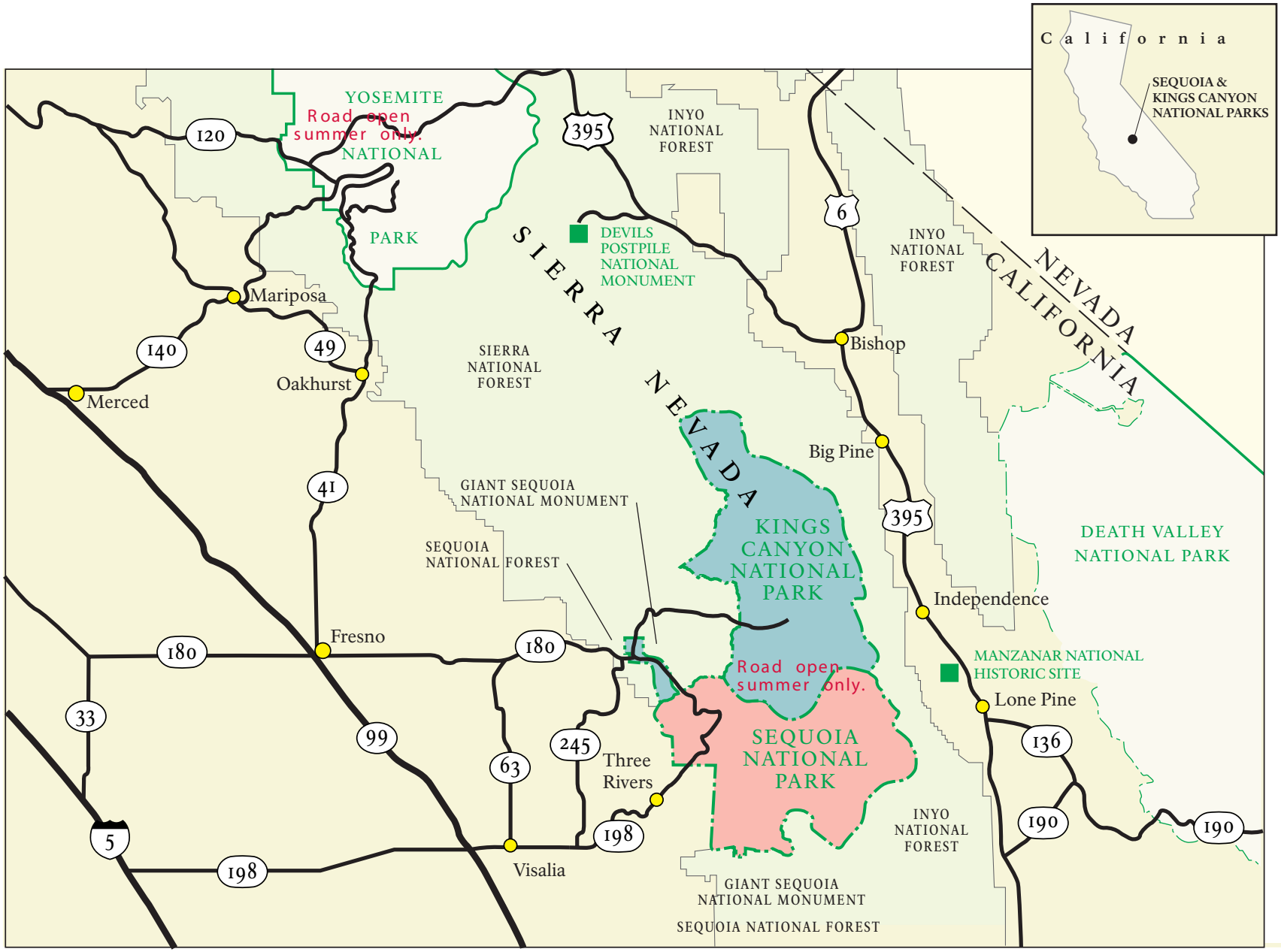
Portions of the 1971 *Master Plan* were controversial. For example, one of the goals of that plan was to phase out stock use, but that action was never implemented. This goal was replaced by a 1986 *Stock Use and Meadow Management Plan* that regulated stock use to protect park resources. Continuing stock use and related impacts to high alpine area have occasionally generated differences of opinion, mainly between stock users and backpackers. The impacts of stock use are continuing to be assessed, and this general management plan will make a decision on the appropriateness of stock use.

Some proposals in the 1971 *Master Plan* cannot be implemented because development was proposed in areas that have since been designated as wilderness. The aerial tramway proposed to Alta Peak, for example, would not be permitted in wilderness and is no longer seen as appropriate by either the public or the National Park Service.

Management of Cultural Resources. Since the 1971 *Master Plan* was completed, a number of historic structures, districts, and landscapes have been identified and inventoried and are being managed according to the "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" (hereafter referred to as the "Secretary's Standards"; NPS 1983), as well as NPS *Management Policies 2001* (NPS 2000c), and *Director's Order #28: Cultural Resource Management* (NPS 1998b). Identifying and inventorying cultural resources is an ongoing activity.

Once cultural resources are identified and evaluated for significance, effective cultural resource management must address the following questions: What should be done to properly care for cultural resources, and how do cultural resources fit into the overall scheme of park management? While the National Park Service strives to preserve and protect cultural resources whenever possible, funding and staffing are insufficient to preserve and protect all such resources in the parks. In addition, cultural resources are only one of many resources requiring attention in the parks.

Planning for this general management plan must strike a balance between equally important but conflicting resources or values by weighing the tradeoffs, for example, between the preservation and protection of cultural resources and the preservation of natural resources, the enhancement of visitor experience and safety, and the park's operational concerns. Any action affecting cultural resources, however, will only be undertaken after appropriate consultations with the California state historic preservation office, any associated Indian tribes, other interested agencies or organizations, and the general public in compliance with section 106 of the National Historic Preservation Act.



North

0 20 Kilometers

0 20 Miles

LOCATION

Sequoia & Kings Canyon National Parks

May 2002 • DSC • 102 • 20,139

Unresolved Issues for Specific Developed Areas. The parks have implemented significant portions of plans for specific developed areas, but there are unresolved issues for some developed areas. For example, the majority of development has been removed from the ecologically sensitive Giant Forest sequoia grove (a park goal for more than 70 years) and the area is being converted to day use. Overnight facilities operated by a concessioner have been replaced at a new developed area, Wuksachi. But the 1980 *Development Concept Plan* for Giant Forest / Lodgepole, which guided these changes, also recommended a 1,700-car parking garage at Wolverton, an issue that a 1996 interim plan did not resolve and that now needs to be reexamined.

Special Use Permits on Public Land in Mineral King. When the Mineral King area was added to Sequoia National Park in 1978, special use permits for about 60 private cabins on public land were authorized by Congress. These permits were granted to the permittee of record in 1978, and they were to last until that individual died. Further, the permits carried the stipulation that they could not be transferred. Now that permits have begun to expire, some permittees or their families would like to continue use of park land as a location for private cabins, and they would like the permit conditions to be changed so that permits could be transferred. The park agreed to resolve this issue in the general management plan in lieu of legislative action. Privately owned structures that were allowed to be placed on public land through special use permits can be acquired for public use. This action would reinforce the National Park Service's mission to provide enjoyment for this and future generations. The Mineral King Road Cultural Landscape District has recently been listed on the National Register of Historic Places as a cultural landscape, so the decision must balance historic preservation and park purposes, natural resource values, and the values of public use and access to national parks.

The Changing Context of the Parks in the Regional Ecosystem. Originally Sequoia and Kings Canyon National Parks were set aside to protect the sequoia groves. However, it soon became apparent that these areas were not large enough to protect the groves, and surrounding areas were recognized as possessing national park character, so the parks were expanded. Today, scientific research has shown that biological communities do not function independently. As a result, in the 1990s Congress mandated the Sierra Nevada Ecosystem Project (SNEP), which pulled together scientists, managers, and local governmental representatives to develop a better understanding of how the various physical, biological, and social components of the entire mountain range interact, to establish a resource information base, and to identify means by which the entire ecosystem can be sustainably managed. The environmental impact analysis is based on information collected through the ecosystem project, as well as other efforts. Additionally, the Giant Sequoia Ecology Cooperative, an informal consortium of representatives from all agencies and entities that mange sequoia groves (National Park Service, U.S. Forest Service, Bureau of Land Management, the Tule Tribe, California State Parks, California Department of Forestry and Fire Protection, and University of California) meets periodically to exchange ideas and information, and to coordinate the management of sequoia groves.

Guidance for the Plans

ENABLING LEGISLATION

Sequoia National Park was established as the nation's second national park on September 25, 1890. The primary purpose for establishing the park is described in the act's preamble:

> Whereas, the rapid destruction of timber and ornamental trees in various parts of the United States, some of which trees are the wonders of the world on account of their size and limited number growing, makes it a matter of importance that at least some of said forests should be preserved.

The legislation also stipulated that Sequoia National Park is to be a place "dedicated and set apart as a public park, or pleasuring ground, for the benefit and enjoyment of the people," and it is to be managed "for the preservation from injury of all timber, mineral deposits, natural curiosities or wonders . . . [and for] their retention in their natural condition."

One week later, on October 1, 1890, legislation was enacted that nearly tripled the size of Sequoia National Park and established General Grant National Park. This legislation extended the same protection to the new areas.

An act of July 3, 1926, again enlarged Sequoia National Park and instructed the secretary of the interior to establish regulations aimed at

> the freest use of said park for recreational purposes by the public and for the preservation from injury or spoliation of all timber, natural curiosities, or wonders within said park and their retention in their natural condition . . . and for the preservation of said park in a state of nature so far as is consistent with the purposes of this Act.

Kings Canyon National Park was established by an act of March 4, 1940. This act abolished General Grant National Park, added its lands to Kings Canyon National Park, and provided that the new park be "dedicated and set apart as a public park . . . for the benefit and enjoyment of the people."

An act of August 6, 1965, added Cedar Grove and Tehipite Valley to Kings Canyon National Park and instructed that these lands be managed "subject to all the laws and regulations applicable to such park."

The National Parks and Recreation Act of November 10, 1978 (Public Law [PL] 95-625), added U.S. Forest Service (USFS) lands in the Sequoia National Game Refuge to Sequoia National Park to "assure the preservation . . . of the outstanding natural and scenic features of the area commonly known as the Mineral King Valley . . . and enhance the ecological values and public enjoyment of the area."

In 2000 Public Law 106-574 authorized the addition of the Dillonwood sequoia grove to Sequoia National Park. This area was officially added on December 4, 2001, as a result of fundraising efforts by Save-the-Redwoods League (which raised $5.4 million) and a major contribution from the Wildlife Conservation Board, an agency affiliated with the California Department of Fish and Game. The 1,518-acre tract has 1,180 acres of sequoia groves and is contiguous with the Garfield Grove on what was the southern boundary of Sequoia National Park. This addition protects a major sequoia grove and enhances opportunities for public enjoyment related to the parks' purposes.

Legislation and orders relating to Sequoia and Kings Canyon National Parks are listed in appendix A.

PARK PURPOSES

The purposes of the parks are the reasons why Congress established these areas as part of the

national park system. The purpose statements are basic to all other assumptions about the parks and the ways in which the parks should be used and managed. As defined by park managers, the following are the purposes of Sequoia and Kings Canyon National Parks, which incorporate the mission statement:

- Protect forever the greater Sierran ecosystem — including the sequoia groves and high Sierra regions of the park — and its natural evolution.
- Provide appropriate opportunities to present and future generations to experience and understand park resources and values.
- Protect and preserve significant cultural resources.
- Champion the values of national parks and wilderness.

PARK SIGNIFICANCE

Sequoia and Kings Canyon National Parks are special and unique places because they have

- the largest giant sequoia trees and groves in the world, including the world's largest tree — the General Sherman Tree
- an extraordinary continuum of ecosystems arrayed along the greatest vertical relief (1,370 to 14,495 feet elevation) of any protected area in the lower 48 states
- the highest, most rugged portion of the high Sierra, which is part of the largest contiguous alpine environment in the lower 48 states
- magnificent, deep, glacially carved canyons, including Kings Canyon, Tehipite Valley, and Kern Canyon
- the core of the largest area of contiguous designated wilderness in California, the second largest in the lower 48 states
- the largest preserved southern Sierran foothills ecosystem
- almost 200 known marble caverns, many inhabited by cave wildlife that is found nowhere else
- a wide spectrum of prehistoric and historic sites documenting human adaptations in their historic settings throughout the Sierran environments*

During scoping for the general management plan, most comments indicate agreement with these statements, although some people questioned the use of "appropriate" and "significant" in the purpose statement. What these terms mean is further defined in this document.

Sequoia and Kings Canyon National Parks have been designated as an international biosphere reserve, a program under the United Nations Educational, Scientific, and Cultural Organization that recognizes resources with worldwide importance. While this designation does not grant any form of control or ownership to the international body, it underscores the exceptional and singular qualities of the parks.

THE PARKS' MISSION

The mission of Sequoia and Kings Canyon National Parks is based on the mission of the National Park Service, as defined by Congress in the 1916 Organic Act:

> to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

This mission was further defined in a 1978 amendment (PL 95-250),

* Prehistoric and historic sites are listed, or determined eligible for listing, on the National Register of Historic Places. Primary cultural resources that are considered to be exceptionally significant for the national parks predate 1940 because the parks' development patterns, which include buildings and structures associated with early NPS development, rustic park architecture, and 1930s Civilian Conservation Corps construction, were established by that date.

> The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established.

The Organic Act also authorizes the Park Service to "regulate the use" of national parks, allowing the development of rules, regulations, and more detailed policies to implement the overarching policies set by Congress. Rules and regulations for the national park system are contained in title 36 of the *Code of Federal Regulations* (36 CFR). The Park Service has articulated additional detailed policies in the NPS *Management Policies 2001* (NPS 2001a), which govern the way park managers are to make decisions on a wide range of issues.

The following mission statement for Sequoia and Kings Canyon National Parks articulates the broad ideals and vision that the National Park Service is striving to achieve:

> The mission of Sequoia and Kings Canyon National Parks is to protect forever the greater Sierran ecosystem — including the sequoia groves and high Sierra regions of the parks — and its natural evolution, and to provide appropriate opportunities to present and future generations to experience and understand park resources and values.

All these legal mandates and policies provide the foundation for resource conditions that are to be achieved in the parks, as well as some aspects of visitor experiences.

Many resource requirements are mandated by federal law, as well as NPS policies, which stipulate that certain conditions must be achieved. These requirements, along with the mandate, are listed in Table 1, beginning on page 13.

MISSION GOALS

The parks' mission goals articulate the broad ideals and vision the National Park Service is striving to achieve at Sequoia and Kings Canyon National Parks. The goals for the parks are directly linked to the mission goals contained in the National Park Service's 1998 *Strategic Plan.* Park-specific resource requirements tier off each mission goal.

Specific mission goals are included in appendix B. Strategies and actions to meet legal and policy requirements associated with the mission goals is contained in the parks' 1999 *Natural and Cultural Resources Management Plan*.

- *Mission Goal Ia:* Natural and cultural resources and associated values are protected, restored, and maintained in good condition and managed within their broader ecosystem and cultural context.
- *Mission Goal Ib:* Legally designated and protected wilderness is managed to meet the standards and ideals of the Wilderness Act and as a component of a larger regional wilderness area.
- *Mission Goal Ic:* Sequoia and Kings Canyon National Parks contribute to knowledge about natural and cultural resources and associated values; management decisions about resources and visitors are based on the best available scholarly and scientific information.
- *Mission Goal IIa:* Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and appropriate recreational opportunities.
- *Mission Goal IIb:* Park visitors and the general public understand and appreciate the preservation of the parks and their resources for this and future generations.
- *Mission Goal IVa:* Sequoia and Kings Canyon National Parks use current management practices, systems, and technologies to better preserve park resources and to better provide for public enjoyment.

- *Mission Goal IVb:* Sequoia and Kings Canyon National Parks increase managerial resources through initiatives and support from other agencies, organizations, and individuals.

LAWS, REGULATIONS, SERVICEWIDE MANDATES AND POLICIES

As with all units of the national park system, the management of Sequoia and Kings Canyon National Parks is guided by the 1916 Organic Act that created the National Park Service, the General Authorities Act of 1970, the act of March 27, 1978, relating to the management of the national park system (referred to as the Redwood amendment), and other applicable federal laws and regulations, such as the Endangered Species Act, the National Historic Preservation Act, the Wilderness Act, and the Wild and Scenic Rivers Act. The National Park Service has also established management policies for all units under its stewardship, as stated in *NPS Management Policies 2001* (NPS 2001b).

The key management provision of the Organic Act is:

> The National Park Service shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified . . . by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (16 USC 1).

The Organic Act also authorizes the National Park Service to "regulate the use" of national parks, which means the Park Service may develop more detailed policies to implement the overarching policies set by Congress. The National Park Service has articulated those detailed policies in its *Management Policies*, which govern the way park managers are to make decisions on a wide range of issues that come before them.

The various legal mandates and policies prescribe many resource conditions and some aspects of visitor experience, as defined in Table 1. While the attainment of some of these conditions has been deferred in the parks due to funding or staffing limitations, the National Park Service will continue to strive to implement these policies at the parks with or without a new general management plan. The general management plan is not needed to decide, for instance, whether or not it is appropriate to protect endangered species, control exotic species, provide for handicapped access, or conserve artifacts.

NPS policies and other applicable federal laws require that resource management goals and desired conditions, including strategies and actions to meet legal and policy requirements, be achieved, as stated in the 1999 *Natural and Cultural Resources Management Plan* for Sequoia and Kings Canyon National Parks. This plan describes existing resource conditions and how they differ from the desired future conditions, major issues and stressors that are causing divergence from the desired future conditions, and a long-term strategy for addressing each major issue. The parks' *Strategic Plan* identifies which actions outlined in the *Resources Management Plan* will be implemented during the next five years.

Legal mandates for cultural resources also include the American Indian Religious Freedom Act and Executive Order 13007, "Indian Sacred Sites." Appendix D describes Native American consultations with traditionally associated tribes conducted during the general management planning process. Continuing consultations will seek information on the tribes' desires for access to sacred sites they may wish to identify.

TABLE 1: FEDERAL LAWS AND NPS POLICIES APPLICABLE TO THE MANAGEMENT OF SEQUOIA AND KINGS CANYON NATIONAL PARKS

Desired Condition	Source
Natural Resources	
Vegetation (including Sequoia Groves)	
The preservation from injury of all timber . . . in their natural condition.	Sequoia National Park enabling legislation
The giant sequoia groves — particularly Giant Forest — and the ecosystems they occupy are restored, maintained, and protected	
NPS-managed natural systems, and the human influences upon them, will be monitored to detect any significant changes. Action will be taken in the case of such changes, based on the type and extent of change.	NPS *Management Policies*
Maintain all the components and processes of naturally evolving park ecosystems.	
Fire management activities conducted in wilderness areas will conform to the basic purposes of wilderness.	
Intervention in natural biological or physical processes will be allowed only (1) when directed by Congress, (2) in some emergencies when human life and property are at stake, or (3) to restore native ecosystem functioning that has been disrupted by past or ongoing human activities.	
The National Park Service will re-establish natural functions and processes in human-disturbed natural systems in the parks unless otherwise directed by Congress.	
The National Park Service will, within park boundaries, identify, conserve, and attempt to recover all federally listed threatened, endangered, or special-concern species and their essential habitats. As necessary, the service will control visitor access to and use of essential habitats, and may close such areas to entry for other than official purposes. Active management programs (such as monitoring, surveying populations, restorations, exotic species control) will be conducted as necessary to perpetuate, to the extent possible, the natural distribution and abundance of threatened or endangered species, and the ecosystems upon which they depend.	Endangered Species Act (16 USC 1531, et seq.); NPS *Management Policies*
The National Park Service will identify all state and locally listed threatened, endangered, rare, declining, sensitive, or special concern species and their essential habitats that are native to and present in the parks. These species and their essential habitats will be considered in Park Service planning and management activities.	NPS *Management Policies*
Plant and animal species considered to be rare or unique to a park will be identified, and their distributions within the park will be mapped.	
The management of populations of exotic plant and animal species, up to and including eradication, will be undertaken whenever such species threaten park resources or public health and wherever control is prudent and feasible.	
Exotic species will not be introduced into the parks (except under special circumstances).	

Desired Condition	Source
Natural Resources (cont.)	
The National Park Service will re-establish natural functions and processes in human-disturbed natural systems in the parks unless otherwise directed by Congress. . . . The Park Service will restore the biological and physical components of these systems as necessary, accelerating both their recovery and the recovery of landscape and community structure and function. . . . The Park Service will seek to return (human-disturbed) areas to conditions and processes representing the ecological zone in which the damaged resources are situated.	NPS *Management Policies* (cont.)
Terrain and plants may be manipulated where necessary to restore natural conditions on lands altered by human activity. Management activities may include . . . rehabilitating areas disturbed by visitor use or by the removal of hazard trees.	
Revegetation efforts will use seeds, cuttings, or transplants representing species and gene pools native to the ecological portion of the park in which the restoration project is occurring.	
The National Park Service will actively seek to understand and preserve the soil resources of parks, and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.	
All approved livestock use must ensure the preservation of wilderness resources and character. Superintendents will be responsible for monitoring livestock use in wilderness to the same degree as human use, and may use the same management tools and techniques, including the application of the minimum requirement concept, to manage livestock use that are available for managing other wilderness uses.	
Grazing will be managed and conducted in accordance with management objectives and procedures designed to ensure that grazing does not result in the degradation of park resources. . . . Grazing will be restricted whenever necessary to protect natural and cultural resources and values, or whenever there are conflicts with other recreational users.	
Forage and other habitat requirements of native wildlife populations will be given first priority when determining livestock management priorities.	
Harvesting of plants may be allowed only when it is determined that such harvesting will not jeopardize rare, threatened, or endangered plant or animal species	
The National Park Service will . . . avoid, whenever possible, the pollution of park waters by human activities occurring within and outside of parks.	
NPS and NPS-permitted programs and facilities are maintained and operated to avoid pollution of surface and ground waters; natural and beneficial values of wetlands are preserved and enhanced.	Executive Order 11990, "Protection of Wetlands" (42 USC 4321), *Director's Order #77-1: Wetland Protection,* Clean Water Act (33 USC 1344)
Protection of stream features will primarily be accomplished by avoiding impacts to watershed and riparian vegetation, and by allowing natural fluvial processes to proceed unimpeded.	NPS *Management Policies*
When practicable and not detrimental to NPS mandates to preserve park resources, known hazards will be reduced or removed. When providing for persons' safety and health is inconsistent with congressionally designated purposes and mandates, or impracticable, efforts will be made to provide for such safety and health through other controls, including closures, guarding, signing, or other forms of education.	

Desired Condition	Source
Natural Resources (cont.)	
The National Park Service will strive to protect the full range of genetic types (genotypes) of native plant and animal populations in the parks by perpetuating natural evolutionary processes and minimizing human interference with evolving genetic diversity.	NPS *Management Policies* (cont.)
The National Park Service will control pests . . . under special circumstances (including) . . . to conserve and protect plants and animals needed and appropriate for developed areas	
Water Resources and Aquatic Ecosystems	
Surface and ground waters are restored or enhanced; water quality meets as a minimum the standard for contact recreation.	Clean Water Act; Executive Order 11514, "Protection and Enhancement of Environmental Quality"; NPS *Management Policies*
NPS and NPS-permitted programs and facilities are maintained and operated to avoid pollution of surface and ground waters	Clean Water Act; Executive Order 12088, "Federal Compliance with Pollution Control Standards"; NPS *Management Policies*
Natural floodplain values are preserved or restored.	Executive Order 11988, "Floodplain Management"; Rivers and Harbors Act; Clean Water Act; NPS *Management Policies*
The natural and beneficial values of wetlands are preserved and enhanced.	Executive Order 11990, "Protection of Wetlands"; Rivers and Harbors Act; Clean Water Act; NPS *Management Policies*
Federal- and state-listed threatened and endangered species and their habitat are sustained.	Endangered Species Act; NPS *Management Policies*
Fishing to be permitted in accordance with regulations	Act creating Sequoia National Park
Protection of stream features will primarily be accomplished by avoiding impacts to watershed and riparian vegetation, and by allowing natural fluvial processes to proceed unimpeded.	NPS *Management Policies*
Populations of native plant and animal species function in as natural condition as possible except where special management considerations are warranted	
Native species populations that have been severally reduced or extirpated from the park are restored where feasible and sustainable.	
Management of populations of exotic plant and animal species, up to and including eradication, will be undertaken whenever such species threaten park resources or public health and when control is prudent and feasible.	
Wildlife	
Federal- and state-listed threatened and endangered species and their habitat are sustained.	Endangered Species Act; NPS *Management Policies*
Populations of native plant and animal species function in as natural condition as possible except where special management considerations are warranted.	NPS *Management Policies*
Native species populations that have been severally reduced or extirpated from the park are restored where feasible and sustainable.	
Management of populations of exotic plant and animal species, up to and including eradication, will be undertaken whenever such species threaten park resources or public health and when control is prudent and feasible.	
Air Resources, Soundscapes, and Lightscapes	
Air quality in the parks meets national ambient air quality standards (NAAQS) for specified pollutants. Park activities do not contribute to deterioration in air quality.	Clean Air Act; NPS *Management Policies*
The National Park Service will preserve the natural ambient soundscapes of parks, which exist in the absence of human-caused sound.	NPS *Management Policies*

Desired Condition	Source
Natural Resources (cont.)	
The National Park Service will protect natural darkness and other components of the natural lightscape in the parks.	NPS *Management Policies*; Sequoia and Kings Canyon National Park *Clover Creek Development Exterior Lighting Design Concepts.*
Geological, Soils, and Paleontological Resources	
Significant caves will be secured, protected, and preserved for the perpetual use, enjoyment, and benefit of all people.	1988 Federal Cave Resources Protection Act
All units of the national park system are closed to new mining claims	1976 Mining in the Parks Act
Caves will be managed to perpetuate karst processes, airflow, mineral deposition, plant and animal communities, and wilderness and cultural values.	NPS *Management Policies*
Natural geologic processes proceed unimpeded.	
Karst terrains will be managed to ensure that water quality, spring flow, drainage patterns, and caves are not significantly altered.	
Paleontological resources, including both organic and mineralized remains in body or trace form, will be protected, preserved, and managed for public education , interpretation, and scientific research	
Natural soil resources and processes function in as natural condition as possible, except where special management considerations are allowable under policy.	
The National Park Service will actively seek to understand and preserve the soil resources of parks, and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.	
Each park should inventory abandoned mineral land sites to identify safety hazards and resource impacts.	
The National Park Service must, to the extent possible, mitigate or eliminate safety and environmental hazards associated with abandoned mineral lands.	
Wilderness	
The administration of wilderness meets the standards within the Wilderness Act: • protection of these areas in an unimpaired state for future use and enjoyment as wilderness; and • preservation of the wilderness character of these areas.	Wilderness Act of 1964; California Wilderness Act of 1984; *Director's Order #41: Wilderness Preservation and Management*
Wilderness is protected and managed so as to preserve its natural conditions and which: • generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable. • has outstanding opportunities for solitude or a primitive and unconfined type of recreation.	
Cultural resources located within wilderness areas are evaluated, protected, and managed to preserve their integrity.	NPS *Management Policies* *Director's Order #28: Cultural Resource Management* "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation"
Fire management activities conducted in wilderness areas will conform to the basic purposes of wilderness.	NPS *Management Policies*

Desired Condition	Source
Natural Resources (cont.)	
Fire Management	
Each park is required to have a fire management plan / environmental assessment that addresses wildland and prescribed fires. Wildland fires are naturally ignited and part of natural systems that are being sustained by parks. Prescribed fires are human ignited to achieve resource management or fuel treatment objectives.	NPS *Management Policies*
Until a plan is approved, parks must immediately suppress all wildland fires, taking into consideration park resources and values to be protected, firefighter and public safety, and costs.	
Fire suppression within wilderness will be consistent with the "minimum requirement" concept. (Minimum tool or administrative practice to successfully and safely accomplish the objective with the least adverse impact on wilderness character or values.)	
Wild and Scenic River Resources	
Protect and enhance the values for which the river was designated, or found eligible and suitable for designation, while providing for public recreation and resource uses which do not adversely impact or degrade those values.	Wild and Scenic Rivers Act "National Wild and Scenic Rivers System; Final Revised Guidelines for Eligibility, Classification and Management of River Areas"
Protect the free-flowing character of the river area.	"National Wild and Scenic Rivers System; Final Revised Guidelines for Eligibility, Classification and Management of River Areas"
Water quality is maintained or improved to levels which meet standards for aesthetics, and fish and wildlife propagation.	Clean Water Act "National Wild and Scenic Rivers System; Final Revised Guidelines for Eligibility, Classification and Management of River Areas"
Cultural Resources	
Prehistoric and Historic Archeological Sites	
Archeological sites are identified and inventoried, and their significance is determined and documented.	Antiquities Act of 1906 National Historic Preservation Act Executive Order 11593, "Protection and Enhancement of the Cultural Environment" "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" NPS *Management Policies* *Director's Order #28: Cultural Resource Management*
Archeological sites are protected in an undisturbed condition unless it is determined through formal processes that disturbance or natural deterioration is unavoidable.	Antiquities Act of 1906 Archeological and Historic Preservation Act Archeological Resources Protection Act "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" NPS *Management Policies* *Director's Order #28: Cultural Resource Management*
In cases where disturbance or deterioration is unavoidable, the site is professionally documented and salvaged.	Antiquities Act of 1906 "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" NPS *Management Policies* "Programmatic Agreement among the National Park Service, Advisory Council on Historic Preservation, and National Conference of State Historic Preservation Officers" Director's Order #28: Cultural Resource Management

Desired Condition	Source
Cultural Resources (cont.)	
Archeological research in parks is conducted in accordance with applicable NPS policies, guidelines, and standards.	Antiquities Act of 1906 "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" NPS *Management Policies* *Director's Order #28: Cultural Resource Management*
Historic Structures and Cultural Landscapes	
Historic structures and cultural landscapes are inventoried and their significance and integrity are evaluated under criteria for the National Register of Historic Places	National Historic Preservation Act Archeological and Historic Preservation Act Executive Order 11593, "Protection and Enhancement of the Cultural Environment" "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" NPS *Management Policies* *Director's Order #28: Cultural Resource Management*
The qualities of historic structures and cultural landscapes that contribute to their actual listing or their eligibility for listing on the National Register of Historic Places are protected in accordance with the "Secretary's Standards," unless it is determined through a formal process that disturbance or natural deterioration is unavoidable.	Antiquities Act of 1906 National Historic Preservation Act, section 106 *Secretary of the Interior's Standards for the Treatment of Historic Properties*, *The Secretary of the Interior's Standards for Rehabilitation* "Programmatic Agreement among the National Park Service, Advisory Council on Historic Preservation, and National Conference of State Historic Preservation Officers" "Protection of Historic Properties" (36 CFR 800) NPS *Management Policies* *Director's Order #28: Cultural Resource Management*
Objects and Archival Manuscripts Collections	
Manage parks to provide for the protection of historic, prehistoric, and scientific features.	Antiquities Act of 1906 "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" NPS *Management Policies* *Director's Order #28: Cultural Resource Management*
Manage parks to "maintain historic or prehistoric sites, buildings, objects, and properties of national historical or archaeological significance and … establish and maintain museums in connection therewith."	Antiquities Act of 1906 Historic Sites Act of 1935 "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" NPS *Management Policies* *Director's Order #28: Cultural Resource Management*
All museum objects and manuscripts are identified and inventoried, and their significance is determined and documented. The qualities that contribute to the significance of collections are protected in accordance with established standards.	Antiquities Act of 1906 National Historic Preservation Act American Indian Religious Freedom Act Archeological Resources Protection Act Native American Graves Protection and Repatriation Act "Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" NPS *Management Policies* *Director's Order #28: Cultural Resource Management*
Ethnographic Resources	
Manage parks to provide for the protection of historic, prehistoric, and scientific features.	Antiquities Act of 1906 Executive Order 13007, "Indian Sacred Sites"
Protect and preserve access for American Indians to sites to allow for the exercise of traditional religions.	American Indian Religious Freedom Act of 1978 Executive Order 13007, "Indian Sacred Sites"

Desired Condition	Source
VISITOR MANAGEMENT REQUIREMENTS	
Visitor Experience and Park Use Requirements	
Visitor and employee safety and health are protected.	NPS *Management Policies*
Visitors understand and appreciate park values and resources and have the information necessary to adapt to the park environments. Visitors have opportunities to enjoy the park in ways that leave park resources unimpaired for future generations.	NPS Organic Act Sequoia and Kings Canyon National Parks enabling legislation NPS *Management Policies*
Park recreational uses are promoted and regulated. Basic visitor needs are met in keeping with park purposes.	NPS Organic Act Sequoia and Kings Canyon National Parks enabling legislation *Code of Federal Regulations,* Title 36 NPS *Management Policies*
New and remodeled buildings, outdoor developed areas, and features are accessible to all visitors, including those with disabilities, in compliance with federal standards. However, it may not be possible to make all sites or historic buildings accessible because the required changes would affect the integrity of the feature or the historic structure. In these cases interpretive brochures or programs could help convey an experience to visitors.	Americans with Disabilities Act Architectural Barriers Act Rehabilitation Act NPS *Management Policies*
The parks solicit input from local communities and the general public to ensure that future actions and programs are responsive to diverse public viewpoints, values, and concerns.	National Environmental Policy Act of 1969 (42 USC 4321–4370d) NPS *Management Policies* *Director's Order #75, Civic Engagement and Public Involvement*
Commercial sightseeing flights over national parks (those occurring within 5,000 feet of ground level) are subject to an air tour management plan prepared jointly by the Federal Aviation Administration and the National Park Service.	National Parks Air Tour Management Act of 2000
Transportation	
Transportation systems are a cost-effective alternative to the development of new facilities; reduce congestion, noise, air pollution, and adverse effects on park resources and values; enhance the visitor experience, simplify travel, make it safer and easier to see park features; and conserve energy and utilize alternative-fueled vehicles when practicable.	NPS *Management Policies*
Development and Sustainability	
New and remodeled buildings and facilities reflect the NPS commitment to energy and resource conservation, as well as durability.	Executive Order 12873, "Federal Acquisition, Recycling, and Waste Prevention" Executive Order 12902, "Energy Efficiency and Water Conservation at Federal Facilities" *Guiding Principles of Sustainable Design* (NPS 1993)
Commercial Services	
Commercial services are used to provide goods and services to visitors. All commercial services must be authorized; must be deemed necessary and/or appropriate; cannot be provided outside the park; and must be economically feasible. Commercial service use levels and types are managed to provide high-quality visitor experiences while protecting natural, cultural, and scenic resources. Commercial services include concession contracts, commercial use authorizations, leases, cooperative agreements, rights-of-way, and special use permits.	NPS *Management Policies* General Authorities Act NPS Concessions Management Improvement Act of 1998

The Context for the Plan

The laws, policies, and special designations that affect park management are described in this section. While each alternative being considered presents a management vision and direction for Sequoia and Kings Canyon National Parks, some proposed actions could require legislative action by Congress in order to be implemented. For example, proposals dealing with new designations of wild and scenic rivers would require legislation.

The context for the plan is also affected by activities occurring outside the parks. For example, Giant Sequoia National Monument was established by presidential proclamation in 2000, thus increasing the protection of giant sequoia groves. Also, adjacent areas have been designated as wilderness. While the monument and adjacent wilderness areas are administered by the U.S. Forest Service, the decisions made for this general management plan will affect resources throughout the region, just as decisions made by other governmental agencies will affect the management of Sequoia and Kings Canyon National Parks.

On a broader scale, the Sierra Nevada Ecosystem Project has identified five factors that are affecting the ecosystem over the long term and that could drastically alter it. While these ecosystem stressors are beyond the ability of any single governmental agency to control, they should be considered in making decisions that will not only protect park resources and values but also contribute to the protection and health of the ecosystem.

Special Congressional Designations and Authorizations

Wild and Scenic Rivers

The Wild and Scenic Rivers Act establishes the national wild and scenic rivers systems to preserve and protect selected rivers, or segments of rivers, in their free-flowing condition. Section 1(b) of the act states:

> It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.

Section 10(a) of the act states:

> Each component of the National Wild and Scenic Rivers System shall be administered in such manner as to protect and enhance the values that caused it to be included . . . without . . . limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its aesthetic, scenic, historic, archeological, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area.

Each river or segment in the rivers system must be classified as "wild," "scenic," or "recreational," depending on the degree of development within the river area. The river area is the land included within the wild and scenic river corridor boundaries. These terms are defined in the act (sec. 2(b)) as follows:

> **Wild river areas** — Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

Scenic river areas — Those rivers or sections of rivers that are free of impoundments with shorelines and watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads [i.e., roads may cross but generally not parallel the river]. These rivers are usually more developed than wild and less developed than recreational.

Recreational river areas — Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Each river segment must also have established boundaries. Boundaries are limited to no more than an average of 320 acres per river mile, measured from the ordinary high water mark on both sides of the river. If drawn evenly along the ordinary high water mark (as defined in 33 CFR 328.3 (e)) on both sides of the river, this would result in a boundary 0.25 mile wide on each side of a river.

Outstandingly Remarkable Values

Outstandingly remarkable values are the river-related and dependent values that make the river segment unique and worthy of special protection, and they form the basis for the river's designation as part of the wild and scenic rivers system. The values include scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values or features. Features must be judged to be unique, rare, or exemplary to the extent that it stands out as among the best on a regional or national basis. River and affiliated land management practices are to concentrate on protecting these values.

Designated River Segments in Sequoia and Kings Canyon National Parks

The following river segments in Sequoia and Kings Canyon National Park have been designated as wild or recreational:

- *Middle Fork of the Kings River (29.5 miles within Kings Canyon National Park) — Wild.* This free-flowing river segment is wholly in designated wilderness. It is accessible only by trail and is primitive in nature, qualifying it for wild classification.
- *South Fork of the Kings River (the upper 24.1 miles within Kings Canyon National Park) — Wild.* This free-flowing river segment is wholly in designated wilderness. It is accessible only by trail and is primitive in nature, qualifying it for wild classification.
- *South Fork of the Kings River (the lower 7.6 miles within Kings Canyon National Park) — Recreational.* Lodging, campgrounds, and other amenities for park visitors are located in or near the river corridor. The river corridor also contains a road that runs parallel to the river, and three road bridges cross the river, thus qualifying it for recreational classification.
- *North Fork of the Kern River (the entire 28.9 miles within Sequoia National Park) — Wild.* This free-flowing river segment is wholly in designated wilderness. It is accessible only by trail and is primitive in nature, qualifying it for wild classification.

Pursuant to the NPS *Management Policies 2001,* general management plans and other plans potentially affecting river resources "will propose no actions that could adversely affect the values that qualify a river for the national wild and scenic rivers system" (sec. 2.3.1.10). Also, no management actions may be taken that could adversely affect the values that qualify a river for inclusion in the national wild and scenic rivers system (sec. 4.3.4).

Comprehensive River Management Plan

Section 3(d) of the Wild and Scenic Rivers Act requires the preparation of a comprehensive management plan for each river segment to provide for the protection of the river values. The plan must address

- resource protection
- development of lands and facilities
- user capacities
- other necessary or desirable management practices

The plan may be incorporated into resource management planning for affected adjacent federal lands

Proposed Additions to the Wild and Scenic Rivers System

Section 4(a) of the Wild and Scenic Rivers Act authorizes studies to determine the eligibility and suitability of rivers for addition to the national wild and scenic rivers system. To be eligible, a river must be free flowing and must exhibit at least one outstandingly remarkable value. Reports of proposed rivers are to identify the

> characteristics which make the area a worthy addition to the system; the current status of land ownership and use in the area; [and] the reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed, or curtailed if the area were included in the national wild and scenic rivers system.

Section 5(d)(1) of the Wild and Scenic Rivers Act states that "in all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic, and recreational river areas."

Park plans may not propose any actions, nor may any management actions be taken, that could adversely affect the values that qualify a river for the national wild and scenic rivers system (*Management Policies 2001,* sec. 2.3.1.10, sec. 4.3.4).

The South Fork of the San Joaquin River and the five forks of the Kaweah River (North, Marble, Middle, East, and South) have been evaluated as to their eligibility and suitability for inclusion in the national wild and scenic rivers system. All of the rivers except the North Fork of the Kaweah were determined to be eligible. Hydroelectric facilities are present on the Marble and Middle Forks of the Kaweah River, and on tributaries of the East Fork of the Kaweah, within Sequoia National Park. However, it has been determined that these facilities would not preclude the inclusion of these rivers in the national system because "the waterway remains generally natural and riverine in appearance" (*Federal Register* 47 (no. 173): 39458).

Water Resources Projects

Section 7 of the Wild and Scenic Rivers Act severely restricts water resources projects on or near designated rivers. It states that "the Federal Energy Regulatory Commission [FERC] shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act" on or directly affecting any river designated as wild and scenic. This part of section 7 is not relevant to the already designated river segments because there are no FERC licensed projects on them. However, as stated above, hydroelectric impoundments and diversions are located on the Marble and Middle Forks of the Kaweah River and on tributaries to the East Fork of the Kaweah River.

No federal agency may recommend authorization of a water resources project (i.e., any construction within the bed or banks of a river that would affect the free-flowing condition of the river) without first receiving a determination from the river managing agency that the project would not affect the river's free-flowing condition or its outstandingly remarkable values

and without seeking approval from Congress. Therefore, water resources projects are permissible only if they are judged by the managing agency not to directly and adversely affect the outstandingly remarkable values or free-flowing condition of the river and if Congress specifically authorizes the project.

Section 7 also prohibits all federal agencies, including the Federal Energy Regulatory Commission, from licensing or assisting with developments above, below, or on a tributary of a wild and scenic river if it will "invade the area or unreasonably diminish the scenic, recreational, or fish and wildlife values present in the area."

Wilderness

The 1964 Wilderness Act (PL 88-577) establishes the national wilderness preservation systems in order to

> secure for the American people of present and future generations the benefits of an enduring resource of wilderness. . . . 'Wilderness areas' . . . shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness.

Wilderness is defined as:

> an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Certain uses are prohibited,

> subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.

Approximately 723,000 acres, or about 83.5% of the parks, have been federally designated as the Sequoia-Kings Canyon Wilderness, requiring this area to be protected and managed in perpetuity to preserve its natural conditions.

Potential Wilderness in the Parks

Two areas — Oriole Lake and the Bearpaw Meadow high Sierra camp — are designated as potential wilderness. These areas would become wilderness when and if the facilities are removed. Both areas could be affected by alternatives being considered in the general management plan.

Backcountry Areas Managed to Preserve Wilderness Characteristics

Additional backcountry areas are managed to preserve wilderness characteristics, resulting in the preservation of wilderness characteristics on 832,756 acres, or 96.24% of the parks. At the same time that the Sequoia-Kings Canyon Wilderness was established, three other areas of the parks included in the wilderness recommendation were not formally designated as wilderness, and Congress stated that this was done

"without prejudice." Each of the following areas has been managed to preserve its wilderness characteristics (in accordance with regulation and policy).

- *Redwood Canyon* — Together with the North Fork of the Kaweah, Redwood Canyon includes approximately 35,321 acres in Kings Canyon National Park. It contains the largest sequoia grove in the park and extensive karst features.
- *North Fork of the Kaweah* — The North Fork of the Kaweah contains rugged terrain and ranges from low foothill country to coniferous forests, including several giant sequoia groves.
- *Hockett Plateau* — Hockett Plateau (the East Fork of the Kaweah River watershed) is around 56,201 acres in the southwestern corner of Sequoia National Park. The area is dominated by the 8,500-foot-high Hockett Plateau, and it contains a variety of natural resources, including extensive tracts of giant sequoia forest.

Wilderness Studies

At the direction of Congress or in accordance with NPS *Management Policies,* wilderness studies have been conducted for the following areas:

- *Chimney Rock* — This area in Kings Canyon National Park is also known as the Jennie Lakes addition. It includes 1,756 acres. The area has been determined suitable for wilderness.
- *Mineral King* — The Mineral King area in Sequoia National Park includes 15,600 acres. It is accessible by road. Popular trails leading out of the valley go to high-altitude alpine areas. Mineral King has been found suitable for wilderness (except for the road corridor and present development).

These areas would undergo a public process of wilderness studies by the parks that could lead to wilderness recommendations for Congress to act on.

As a new addition to the park, the Dillonwood area (approximately 1,518 acres, 1,180 of which contain the sequoia grove) was assessed for its wilderness suitability and was found to be not suitable.

Hydroelectric Facilities

Congress authorized the construction of hydroelectric generating facilities in the parks on the Marble, Middle, and East Forks of the Kaweah River. In 1899 four storage dams were constructed above Mineral King to facilitate more even river flow as well as to generate power at a facility outside Sequoia National Park. Another hydroelectric facility began operating outside the park in 1907, with dams and diversions on the Middle and Marble Forks of the Kaweah and related flumes, four gaging stations, a siphon crossing the Middle Fork, and a cable river crossing within the parks. In response to a determination of eligibility submitted by Southern Consolidated Edison, the California state historic preservation officer has determined the facilities were eligible for listing on the National Register of Historic Places.

In 1974 Congress authorized the National Park Service to permit the continued operation of impoundments and diversions on the Marble and Middle Forks of the Kaweah River for a period not to exceed 10 years (PL 93-522). By 1984 the Park Service was to conduct a study and report to Congress on the impacts of the hydroelectric facilities on the national park.

In 1978, pursuant to Public Law 95-625, the Mineral King area (including four Southern California Edison dams on tributaries of the East Fork of the Kaweah River) was transferred from the U.S. Forest Service to the National Park Service. Public Law 95-625 amended Public Law 93-522 to incorporate hydroelectric facilities contained within the Mineral King addition.

In 1984 the report on the impacts of hydroelectric facilities on park resources (Jordan/Avent 1984) did not find impacts to be significant.

Both the permit and license were subsequently renewed. In 1986 Congress authorized the Park Service to permit the Southern California Edison Company to operate the Kaweah hydroelectric facilities for 10 years and to issue not more than one 10-year permit (PL 99-338). The current permit runs through September 8, 2006. Southern California Edison will have to terminate the operation of hydroelectric generating facilities within the park on or before the expiration of the current permit and restore the affected areas, subject to appropriate compliance.

In 1992 the Federal Energy Regulatory Commission (FERC) renewed Southern California Edison's license for the Kaweah complex facilities outside Sequoia National Park (Project 298-000-California). The commission specifically excluded from the license those portions of the complex on NPS managed land. The current FERC license runs through December 31, 2021.

Mineral King Special Use Permits

Special congressional mandates or designations may also affect how specific resources or areas in the national parks are managed. For example, the act adding the Mineral King area to Sequoia National Park permitted the owners of cabins to continue to occupy their cabins on federal park land (PL 95–625). (Recreation cabin use began under a now-discontinued Forest Service program.) However, Congress did set expiration limits for the cabins by prohibiting the transfer of permits from the permittees of record in 1978, and it allowed the permits to be renewed in five-year increments until the death of that permittee, at which time the cabins were to be removed. The same legislation also prohibited the development of downhill skiing.

ADJACENT LAND USES

Giant Sequoia National Monument

On April 15, 2000, Presidential Proclamation 7295 designated approximately 355,000 acres of U.S. Forest Service land to the north and south of Sequoia and Kings Canyon National Parks as Giant Sequoia National Monument, under the management of the U.S. Forest Service (USFS). The purpose of the national monument is to protect the remaining sequoia groves and their ecosystem. The Forest Service will have until approximately 2005 to prepare a management plan. The north unit, which includes much of the Hume Lake District, has 130,000 acres and the southern unit, 225,000 acres. Based on the proclamation, recreational uses will continue much as they do now, but vehicles will be restricted to roads. The proclamation does not alter private lands (inholdings) or existing leases and permits related to USFS land, and existing water rights are not affected. Roads are to be limited to no more than those in existence at the time of designation, and a transportation plan is to be developed. Mineral rights are withdrawn, and commercial logging is terminated. Management plans could affect the management of the parks by altering recreation patterns.

Designated Wilderness Adjacent to the Parks

Designated wilderness adjacent to the parks contributes to the extensive nature of the Sequoia-Kings Canyon Wilderness, making it part of the core of the largest area of contiguous designated wilderness in California and the second largest in the lower 48 states. Contiguous designated wilderness includes:

- Golden Trout Wilderness on USFS land south of Sequoia National Park
- John Muir Wilderness on USFS land east of Sequoia National Park and east, north and west of Kings Canyon National Park
- Monarch Wilderness west of Kings Canyon National Park
- Jennie Lakes Wilderness west of Kings Canyon National Park and north of Sequoia National Park

ECOSYSTEM STRESSORS

The Sierra Nevada Ecosystem Project (SNEP 1996) and decades of research in Sequoia and Kings Canyon National Parks have identified five important systemic stressors to park ecosystems, as described below. (A more detailed description of stressors is included at the beginning of "The Affected Environment" in volume 2.)

Loss of Pre-Euroamerican Fire Regimes

Between 1891 and 1967 all fires in Sequoia, General Grant, and Kings Canyon National Parks were suppressed, which resulted in important ecosystem changes. For example,

- A buildup of dense vegetation along foothill streams and in their upper catchments reduced annual streamflow in the foothills.
- Both stream chemistry and streamflow in the mixed-conifer zone were altered, with unknown consequences for aquatic ecosystems.
- Giant sequoia reproduction, which in the past depended on frequent fires to expose mineral soil and open gaps in the forest canopy, effectively ceased, and the reproduction of other shade-intolerant species was greatly reduced.
- The accumulation of dead material created an increased hazard of severe wildfires sweeping through the mixed-conifer forests.
- The lack of fire also reduced habitat critical for certain wildlife species.

The parks began an aggressive program in 1968 to reestablish fire in the parks' ecosystems. This program of prescribed fire has made great progress in the giant sequoia groves and has substantially restored a considerable area of mixed-conifer forest. Much, however, remains to be done.

Introduced Species

Hundreds of nonnative species have become established within the parks, severely altering some park ecosystems, and invasions are ongoing. More than 120 exotic vascular plant species are presently known within park boundaries, and new ones are discovered yearly.

- Introduced species make up about 99% of herbaceous biomass in foothills grasslands, potentially affecting soil water dynamics, stressing native species, and perhaps increasing the probability of invasion by particularly noxious species.
- Blister rust is reducing the number of sugar pines in the parks, which are one of the most important food sources for seed-eating animals in the mixed-conifer zone.
- Even before the parks were created, waters that were originally barren of fish had been stocked, and new species introduced. As a result, most aquatic communities above 7,000 feet have been altered, sometimes severely, resulting in a decline in both native invertebrate and vertebrate species. Additional damage has been caused by hybridization. For example, the Little Kern golden trout was almost lost due to hybridization with exotic rainbow trout.
- Domestic species (especially cats) and other exotic wildlife periodically establish themselves at lower elevations and compete with native wildlife for resources.
- Portions of Sequoia National Park have been severely grazed in the recent past by trespass cattle and now harbor numerous nonnative plants.

An aggressive program to remove or control many species of invasive plants is now underway.

Air Pollution

Sequoia and Kings Canyon National Parks periodically experience some of the worst air quality in the United States.

- Ozone-sensitive individuals of ponderosa and Jeffrey pines show extensive foliar injury at present ozone levels. While mature giant sequoias seem to be relatively resistant to present ozone levels, sequoia seedlings are more vulnerable to injury.
- Chronic ozone pollution could lead to shifts in forest structure and composition.
- High-elevation lakes and streams are very dilute and potentially sensitive to human-induced acid deposition. While not now a problem, future increases in acid deposition would likely alter aquatic communities.
- The deposition of atmospheric nitrogen in park watersheds has been slowly increasing, and there has been a decrease in dissolved nitrogen leaving watersheds. The consequences for aquatic and terrestrial plant communities are unknown, but scientific studies are underway.
- Sequoia and Kings Canyon National Parks are downwind of the agriculturally rich San Joaquin Valley, where tons of pesticides are used every year. These pesticides can drift into the parks on prevailing winds. While cause-and-effect links between synthetic chemical drift into the parks and effects on park ecosystems have not yet been established, research in the parks and elsewhere suggests that effects may partly explain the decline of amphibians.

Habitat Fragmentation

Intensifying land use and population growth on lands adjacent to the national parks are turning the parks into biological islands, which will make the ecosystems significantly more difficult to preserve with their biodiversity intact.

- Several species have either already disappeared from this part of the Sierra Nevada or survive in very small numbers, most likely as a result of habitat loss on adjacent lands, leaving insufficient park habitat to support viable populations.
- Coniferous forested lands to the north and south of the parks have been altered by timber harvest, grazing, water diversions, nonnative species, and loss of natural fire regime, potentially contributing to a decline of forest wildlife populations in the region.
- Past domestic sheep grazing on public lands east of the Sierra Nevada crest, along with other factors, previously threatened the re-establishment of healthy populations of Sierra Nevada bighorn sheep in and adjacent to the parks, leading to their endangerment. Bighorn sheep now are recovering slowly.
- Animals that are protected inside the parks (e.g., deer, bear, and band-tailed pigeons) become legal game species outside the parks. How these animals are managed outside the parks affects the age structure and abundance of species within the parks.

Rapid Anthropogenic Climatic Change

Average global temperatures have been rising in this century, and global temperatures are projected to rise by another 1.0 to 3.5°C (2 to 6°F) over the next century. It is unknown how global climatic change will manifest itself locally in the Sierra Nevada.

- Based on paleoecological records, global summertime temperatures 10,000 to 4,500 years ago were perhaps up to 2°C higher than now, with prolonged summer drought in California. The species composition and fire regimes of Sierran forests were quite different from those of today.
- Increasing average temperatures will probably result in higher snow lines, earlier snowmelt, and prolonged summer droughts, affecting the viability of certain species. Giant sequoia seedlings are highly vulnerable to drought, and drought stress would make mature trees more vulnerable to insects, pathogens, and air pollution.
- Some Sierran habitats will likely shift to higher elevations. Organisms with limited

mobility may become extinct locally, and some habitats, such as high alpine, are likely to disappear entirely, leading to the irreversible loss of some species.

Rapid anthropogenic climatic change has the potential to become the greatest stressor on the ecosystems of Sequoia and Kings Canyon National Parks. While there is little that park managers can do to prevent global warming, they can take some steps to mitigate impacts on park ecosystems. For example, the resilience of forests to climatic change and consequent extreme wildfire behavior can be increased by restoring a more open structure to the forests.

The Sequoia–Kings Canyon Wilderness

The Scope of the Plan

Overview

As a major policy document for Sequoia and Kings Canyon National Parks, this general management plan is the proper forum to address societal and community values related to the parks. Major values that will be affected by decisions for this plan, as well as tradeoffs, are discussed below for natural resources, cultural resources, and visitor / community values. Some values are supported by law and policy, while others reflect changes in our society.

Major decisions that must be made in the plan relate to determining what activities and uses are appropriate in the parks. These decisions will affect the amount of visitor use and the types of visitor experiences, park operations, and land uses within the parks.

The National Park Service requires that general management plans determine whether park boundaries are adequate for protecting resources or whether they need to be adjusted. Many recommendations have been made about boundary adjustments during public scoping. However, adjacent areas are generally protected by other public agencies, so this document specifies which areas should be the focus of a detailed boundary adjustment study to be undertaken after the general management plan has been approved.

The scope of the plan also determines the scope of the environmental impact analysis. The final sections of this chapter discuss which impact topics will be analyzed and which have been dismissed because there will be no impacts.

Values and Issues Identified during Scoping

Natural Resource Values and Issues

Giant Sequoia Groves

Giant sequoia groves used to be much more extensive; now the groves are found only in a limited range along the west side of the Sierra Nevada. Sequoia and Kings Canyon National Parks contain the biggest examples of the world's largest trees. The General Sherman, General Grant, Lincoln, and other large sequoias are estimated to be 1,800 to 2,700 years old. The largest sequoias are as tall as an average 26-story building, and their diameters at the base exceed the width of some city streets. As they continue to grow, they produce about 40 cubic feet of wood each year, approximately equal to the volume of a 50-foot-tall tree one-foot in diameter. The scale of the trees still astounds visitors. The designation of the parks as an international biosphere reserve underscores the world-class nature of these resources.

The following public values related to natural resources are supported by law and policy:

- maintaining and preserving natural ecosystems, and protecting native vegetative communities
- protecting and improving conditions for threatened and endangered species
- protecting and improving the quality of water resources (water quality, hydrology, and floodplains)
- protecting and improving air quality
- protecting outstanding resource values of wild and scenic rivers
- protecting caves

The Night Sky

Sequoia and Kings Canyon National Parks offer opportunities to experience the night sky free from artificial light, one of a dwindling number of places in the country where this is possible. Efforts should be undertaken to ensure that light pollution from inside the parks does not erode this value.

Natural Sounds and Quiet

The parks offer opportunities to enjoy natural sounds and quiet, which the public has affirmed that they value. Park regulations help preserve natural soundscapes, and in campgrounds quiet times are enforced. Nevertheless, noise from motor vehicles, RV generators, communication devices, and even some levels of conversation can intrude on natural sounds and quiet. These unnatural sounds can sometimes be heard miles from their source, potentially spoiling the experiences of other park users.

Sounds from aircraft can also be disturbing to the park experience. NPS managers work closely with local military bases to minimize overflights and low-flyers. Because airspace over the parks is primarily assigned to military use, scheduled commercial flights are less frequent. Commercial air tours are a potential use in the future, which could affect natural quiet.

Cultural Resource Values and Issues

Cultural resources are valued for their history and the perspective they bring to more recent changes. Specific stories that are echoed by buildings, facilities, and other park resources include the following:

- Native American uses of the parks are seen in trails, grinding holes, pictographs, and other artifacts.
- Early explorers like Hale Tharp, who lived in a fallen sequoia log that can still be visited, had contact with Native Americans. Tharp also knew John Muir, who explored the park area.
- Logging interests and the Kaweah Colony (a socialist communal group), who were drawn by tales of fabulous trees and left huge stumps in decimated sequoia groves, propelled the establishment of national parks to protect the trees.
- Ranchers and sheep herders long sought summer pasture in the parks.
- The lack of precious metals disappointed early miners in Mineral King.
- The parks were established as a result of pressure from preservationists and other interests, including local Visalia newspaperman George Stewart.
- The U.S. Army was the first to manage the parks and to construct park roads. The many Civil War veterans named the largest trees to commemorate war heroes.
- Early recreation community development occurred in Wilsonia, Silver City, and on U.S. Forest Service land in Mineral King so that people could escape the summer heat in the valley.
- Early promotion of the parks by the National Park Service led to the development of concession facilities to accommodate increased visitation. The perils of growth were recognized early on by long-time superintendents Colonel White and Walter Frye.
- The legacy of rustic character continued in construction projects done by the Civilian Conservation Corps from the 1930s through the 1940s.
- The conservation movement influenced the parks' history by donating land (such as Zumwalt Meadow) and facilities, by leading backcountry trips, and by supporting public preservation in the Mineral King area.
- The 1970s controversy over the Mineral King area stopped the development of a ski resort and led to the eventual transfer of this

area from the Forest Service to the National Park Service.

- The 1984 establishment of wilderness areas limited park development and promoted stewardship of wilderness values.
- Scientific research has expanded essential knowledge about sequoias, Sierra Nevada ecosystems, bears, caves, and fire. The Mount Whitney-Smithsonian Institution shelter supported scientific research.
- The removal of historic facilities to support the longtime goal of restoring Giant Forest illustrates growing awareness of the detrimental impact of development patterns on sequoia groves and the National Park Service's resolve to protect the internationally significant groves.
- The continuing interest in resource conservation is underscored by the establishment of Giant Sequoia National Monument in the surrounding national forest.
- Native American uses of the parks continue, with an increased understanding, protection, and accommodation of traditional uses.
- Current cultural resource studies are examining Mission '66 resources in the parks to determine if they might be eligible for listing on the National Register of Historic Places.

Visitor and Community Values and Issues

Park Character and Atmosphere

The parks are valued for their scenery; their natural and cultural resources; their comfortable, low-key, and relaxed character or atmosphere; and the appearance of the built environment. Both Sequoia and Kings Canyon National Parks are valued as early examples of the national park idea. Citizens stated in public planning meetings and in written comments that they appreciate the protected wilderness, ensuring that little change will occur, as well as the opportunity to participate in recreational activities in relatively uncrowded locations. Aspects of the visual character that are appreciated by visitors include structures and development that echo early cattle grazing, pioneer settlement, and the Great Depression era CCC work. Typical historic buildings constructed of rock, logs, and even sequoia pieces look underscaled within the commanding landscape. Character-defining structures or elements include ranger stations, lodging, housing, restrooms, signs, walls, roads, curbs, benches, and detailing. To identify and protect these values, historic structures have been studied, resulting in an *Inventory of Significant Structures* and a series of guidelines, including the *Architectural Character Guidelines, Road Character Guidelines,* and *Exterior Lighting Concepts*. Nominations to the National Register of Historic Places for the Wilsonia Historic District and the Mineral King Road Cultural Landscape District considered the value of early 20th century recreation communities. These recreation communities are particularly valued by both private landowners and special use permit holders who use them seasonally or year-round; however, others see these communities as privileged enclaves not appropriate in national parks.

Public Ownership

National parks are one of the most popular government programs ever developed — setting aside outstanding natural and cultural resources for public enjoyment, identity, and pride. Unique and special natural and cultural resources are to be protected, conserved, and preserved so that they can provide enjoyment for citizens today and for generations to come.

Public Access

The public expects parks to protect the resources for which they were established, and also to provide enjoyment by allowing access to those resources in a manner that preserves them for future generations. The public does not see these parks as special ecological or cultural museums

that are not be used by the public, rather they understand the parks as interactive ecosystems that include human use, lively learning places, spectacular settings for recreation, important scientific research areas and laboratories, and natural areas of great intrinsic value. They want access to what the parks offer, whether it is recreational, educational, emotional, or spiritual. Access affords opportunities for visitors to learn about park values and the ethics of protecting places like this for the benefit of all people. These values — stewardship, leave-no-trace practices, sustainable park practices — can be taken home and applied in local settings.

An Uncrowded Atmosphere and Diverse Levels of Social Interaction

There is public support for retaining the relatively uncrowded atmosphere that offers diversified experiences with different levels of crowding. The public desires that the parks remain far less crowded than parks like Grand Canyon and Yosemite. Public scoping comments generally recognized that the Grant Grove and Giant Forest areas should remain the most visited areas. But even within those areas, visitors should be able to find more secluded and less crowded places at different times and seasons. The parks have five primary front-country developments (Cedar Grove and Grant Grove in Kings Canyon National Park; Giant Forest, Ash Mountain, and Mineral King in Sequoia National Park). The unique setting of each area provides a different kind of park experience, with varying levels of visitor use. The public values these differences. Even within the backcountry there are more heavily used areas. Unroaded areas can only be reached by trail, and permits are required so that visitation can be monitored, resource damage limited, use dispersed, and various levels of solitude offered.

A Range of Visitor Experience Opportunities

Visitors like to choose among opportunities to experience park resources. The experiences offered should accommodate different user skills, abilities, and age levels. There should be activities for children, seniors, and people with disabilities, as well as for automobile tourists, backpackers, and bus tour groups. Park settings — from developed features and villages to remote backcountry locations — should allow users to choose their experiences.

Wilderness Values

Generally, public comments indicate that as population expands, there is increasing support for retaining untouched, primeval areas that can provide solitude. For many people, just knowing that wilderness exists is important. Wilderness is also valued for the different recreational opportunities it provides — primarily hiking, backpacking, stock use, and rock climbing.

The Restorative Nature of the Parks

Many people have mentioned the importance of the restorative and regenerative power of these parks. The parks are a place apart, a vast wilderness area where natural forces are supreme, where four seasons contrast sharply with the climate of the adjacent lowlands, and where the rustic character of development blends rather than competes with native surroundings. These factors help define what is special about Sequoia and Kings Canyon and what is worthy of passing on to future generations in an unimpaired state.

MAJOR DECISIONS TO BE MADE

Appropriate Amounts of Visitation and Access to the National Parks

The general management plan must determine the appropriate amounts of visitation to the parks that can be maintained without causing irreparable resource damage or altering the desired experience. This is the parks' carrying capacity, and it is affected by the following considerations:

- *When the amount of visitation does not cause a primary resource impact, how should carrying capacity be dealt with?*

  The general management plan needs to decide if more visitor use is desirable, what constitutes too much use, and what makes a good park experience. Currently the frontcountry areas of the park are open to everyone — the experience is affected only by how much visitation occurs. What level of crowding and social contact are acceptable? Summer weekends and holidays are crowded, and some visitors have said that crowding during some peak use times adversely affects their visits. Traffic congestion and the lack of parking are worst at visitor centers, the Sherman Tree, Grant Tree, and Moro Rock, as well as in the Grant Grove and Lodgepole areas. Public comments made throughout the general management planning process clearly indicate that the Park Service needs to deal with crowding proactively in order to maintain a quiet, low-key, and uncrowded experience. For this reason, the public has supported transit systems in Giant Forest (NPS 1996a).

  The Wild and Scenic Rivers Act requires managing agencies to address the issue of user carrying capacity for designated river segments. The act does not mandate that carrying capacity be interpreted as an absolute number of people.

- *What other factors besides road capacity affect the volume of visitation?*

  Vehicles are about the only practical way for people to get to the parks. The mountainous roads can only accommodate so much traffic before gridlock occurs, particularly at popular features and in developed areas. Also, parking lots can be developed only at certain places because of topography and other resource constraints. However, other factors affect capacity, such as the number of people per vehicle; how traffic is dealt with in crowded areas; current road conditions, circulation patterns, and parking areas; and options for using transit. For example, currently each automobile entering the parks carries an average of a little over two people; however, more people per car would increase the number of people who could come by automobile, given that the road system can only accommodate so many vehicles. Capacity could also be increased by having visitors park in outlying locations and riding transit to popular features; this would help improve resource conditions near highly popular features and make parking easier to find, but the popular features would continue to be crowded during peak times. The determination of capacity must correlate closely with the purpose and significance of the parks, and the related values and desired conditions. One of the decisions is to what extent can alternate means of transportation be used to improve the parks' carrying capacity without altering the desired visitor experiences?

- *To what extent can the parks balance increased day use visitation while retaining their park character?* A number of factors affect the answer to this question:

  <u>What elements make up park character?</u> Responses to questions in the Planning Workbook (Newsletter 4) provide some guidance about public thinking. Public response has been that park character means continuing to provide the same mix of experiences, but limiting growth. Approximately a quarter of respondents felt that it was important to meet the needs of day users and changing user groups; but 42% felt that change to accommodate new use patterns should be resisted. At the same time 69% of respondents felt that facilities for both day and overnight users needed to be retained, and 23% wanted more day use facilities. Of the respondents, 39% wanted to identify additional park features. In defining appropriate facilities,

33% wanted to reduce, limit, or relocate them outside the parks; 28% wanted to retain the current mix of commercial and visitor services; and 35% wanted to replace or redesign and allow for some expansion, but no new developed areas. In dealing with congestion, 32% wanted congestion to regulate use; 22% wanted to reduce congestion by use limits; 17% wanted to increase parking capacity; and 29% wanted mandatory transit. When discussing transit, 53% wanted to expand voluntary shuttles, 28% wanted to limit shuttles to Giant Forest, and 19% wanted mandatory shuttles.

How have historic access methods changed? When the parks were first established, visitors sometimes arrived by various means of public transit — wagons, stagecoaches, trains, and buses. Within Sequoia and Kings Canyon, glass-topped buses were used during the 1920s. When automobiles became a predominant form of transportation, Congress mandated that automobile access be provided. That decision brought with it increased freedom of visitation, automobile service stations, increased fumes and engine noise, as well as automobiles parking on sensitive resources. Parking spaces became scarce during peak times, and motorists spent frustrating amounts of time looking for parking spaces instead of experiencing what the parks had to offer. However, some visitors may now believe that the freedom to drive to park destinations is a tradition to be maintained.

How have use patterns changed? While early development in the parks was geared toward overnight visitation for relatively long periods, changing use patterns have forced a change in this type of use. With a burgeoning regional population, the result has been more use during the day. The changing workplace and pace of life also affect visitation, with shorter vacations becoming more common. Even backcountry overnight use is for shorter periods of time. The largest impact of these trends will be seen on the parks' frontcountry areas and developments. Alternate transportation can help respond to this pressure but will result in a different experience for day users since they would have less freedom of choice in how to reach their destinations at certain times.

- *To what extent can education and limits on visitation support fair access and visitor freedom?*

  Methods could include gate limits / restrictions, permits for use, user fees, regulation, education, or alternate transportation. The desired combination would depend on what park vision is adopted.

  Should day use reservations be combined with a certain number of spaces set aside for visitors on a first-come / first-served basis?

  Should there be more regulations on vehicle access, such as vehicle length limits to facilitate better traffic flow?

  Can education help provide information about seasonal, peak season, and daily visitation patterns so visitors can plan for the type of experiences they want?

  Can a transit system, similar to that envisioned for Giant Forest (outlying parking areas and shuttles to the grove), be effectively used elsewhere?

Appropriate Visitor Experiences

- *What range and ability level of recreational activities are appropriate to accommodate visitors without changing the traditional park atmosphere?*

  The traditional range of park activities includes hiking, backpacking, caving, rock-climbing, late summer water play, fishing, and winter season activities such as snow play, sledding, cross-country skiing, and snowshoeing. For most of

these activities, levels from beginner to expert exist. While ice skating and downhill skiing were once provided and are seen by some long-term users as traditional and desirable, these activities are not economically viable in the parks.

While most comments indicated that visitors were satisfied with the existing traditional range of activities, broader recreational trends are also evident in the parks. For example, snowshoeing has regained popularity in recent years and is something that most people can easily do. Kayaking has also become popular during certain seasons, but it involves risk and requires a great deal of expertise, and there are no beginner kayaking rivers in the parks.

Should the range of activities be expanded if new activities potentially could alter the experiences of other visitors or increase demands on park staff? Not knowing what types of recreation will emerge in the future, the National Park Service has criteria to assess the appropriateness of new activities. Should the criteria only allow activities that cannot take place elsewhere? According to responses to the Planning Workbook, 39% of the respondents said all new activities should be discouraged, and 36% said any new activities allowed must be those that cannot take place elsewhere.

How should Kings Canyon and Sequoia manage requests for commercial air tours? In many parks air tours are popular, and while these tours offer a unique sight-seeing opportunity, the resultant noise negatively affects many other users, especially in parks where visitors value solitude and natural soundscapes. The National Parks Air Tour Management Act now applies to all commercial, sightseeing flights over national parks (those occurring within 5,000 feet above ground level).

- *Can the following specific activities be accommodated while protecting resources?*

  Stock use. The general management plan must decide whether stock use (horses, mules, and llamas) is appropriate. Backcountry hikers often are disturbed by the impacts of stock use — the presence and smell of urine or feces, the potential introduction of alien weeds, heavily grazed and trampled meadows, dust, erosion, and some widened trails. As a result, some groups want stock use eliminated. While the 1971 *Master Plan* called for phasing out stock use (specifically horses and mules), the action was never implemented. Instead programs were established to monitor resource conditions, set party size limits, and restrict or close certain areas to stock so that resource conditions could be improved.

  The general management plan will look at whether resource condition monitoring and research indicate that stock use can be continued without irreparable resource degradation. Once a decision about appropriateness and stock use has been made through the general management planning process, specific types of restrictions, limits, regulation, and monitoring would be covered within the resource management plan (both a backcountry / wilderness management plan and a meadows management plan).

  Bicycling Opportunities. To what extent can more bicycling be encouraged while providing visitor safety and meeting the requirements of law and policy? Bicycles are allowed only on park roads since NPS policy does not allow biking on trails. While mountain biking has become a popular recreational activity, both law and NPS policy forbid off-road biking in the parks. At the same time, bicycling is a very sustainable means of providing alternate transportation in developed areas, as well as a form of recreation. However, recreational bicycl-

ing may be less satisfying and less safe on a road shared with motor vehicles. For the Cedar Grove area in Kings Canyon National Park, 45% of the respondents to the Planning Workbook said they do not mind both bicycles and vehicles on roads, 30% felt bicycling should be encouraged by establishing bike lanes or closing roads, and 25% wanted dedicated lanes or separate bike routes. The Cedar Grove area has a relatively flat terrain, where bicycling could be a viable means of transportation. Also, the river road is a narrow, rough, one-way road that offers potential for increased recreational use. Connections to destinations and from campgrounds may be needed. Bicycle lanes could be striped on the Kings Canyon Highway, or dedicated bike routes could be developed.

In Sequoia National Park the use of Colony Mill Road (a historic right-of-way) has been suggested as a more challenging recreational bicycling route. However, this area is managed as wilderness, meaning that bicycling is an inappropriate use.

Increased Access to Caves. To what extent can more "adventure tours" provide an intermediate level of caving experience to the general public without degrading cave resources? While the parks contain hundreds of caves, general public access is limited to Crystal Cave. Several types of tours are offered, including a historical tour. Researchers and experts have access to more caves. Would additional public tours require facilities such as hardened entries and gates to protect these caves? Public comments on the Planning Workbook suggest that present opportunities are sufficient for most visitors — 39% wanted to continue current management, and 30% wanted additional wilderness designation to offer further protection of cave resources. In contrast, 15% felt that more guided cave tours would be beneficial, and 16% felt wilderness designation should be added along with more tours.

- *To what extent can visitor-related impacts be reduced by educational programs?*

  The public feels education, regulation, and limitations should all be used to maintain the parks. Public comments support functioning ecosystems — not just places that look natural. Increasing scientific knowledge is helping define the line between appropriate and inappropriate activities and locations. For example, meadows are now known to be sensitive, and baseball, camping, and parking are no longer allowed in them. Wildfire is an important element in the ecological balance, and NPS *Management Policies* endorse allowing many wildfires to burn rather than suppressing them. What is evolving is a philosophy of stewardship and wise use, and visitors are generally supportive of activity restrictions in order to protect natural resources. Visitors learn about the park ecology and the impacts of their actions on the natural, self-supporting system. Safety precautions related to bears and other animals, such as cougars, are common visitor knowledge due to educational programs and information in the park newspaper. Managing the parks' black bear populations involves public safety and habitat protection. While serious bear/human conflicts are rare, and no human deaths have occurred, the parks have had to destroy 20 bears in the last 20 years. At the same time, education and changes to park facilities have reduced the potential for conflict, and the numbers of bears destroyed has been declining. Picnic and other facilities have been closed or relocated so that bear/human conflicts do not occur. Bear-proof food storage lockers, refuse containers, food canisters, and even backcountry food storage lockers are now common facilities

Appropriate Park Facilities and Their Relationship to Park Operations

- *In order to protect resources, improve visitor services, and provide operational efficiency, to what extent should new visitor facilities be provided, older facilities updated, or historic development patterns retained?* Park facilities have an effect on park operations and efficiency. Because these parks are over 100 years old, some buildings and utilities have outlived their design life. In other cases historical development patterns affect both resource protection and park operations.

  Roads and transportation-related facilities. Due to terrain, all access roads, including the Generals Highway and the Kings Canyon Highway, will remain primarily one- or two-lane park roads with slower speeds than typical highways. However, what changes to roads, entrance stations, intersections, and parking areas can improve visitor experiences by facilitating improved traffic flow? What kinds of alternate transit systems and support facilities are feasible and can improve park resource protection, as well as visitor experiences? Would paving public backroads increase maintenance efficiency without altering the adventurous experience many park visitors value?

  Historic development patterns. In the past structures were built in or near what are now known to be very sensitive resources — sequoia groves, meadows, and streams. Sequoia National Park has been in the forefront of resource restoration in the national park system with the removal of the Giant Forest village area in order to protect and restore impacted areas of the grove. So far, 282 buildings and over 1 million square feet of asphalt have been removed, and 231 acres of the sequoia grove have been restored. A picnic ground at Hazelwood was closed in 1969 when a falling sequoia killed a visitor. The park superintendent's house was damaged by a toppling sequoia in 1941 and was not replaced. Campgrounds at Sunset Rock, Round Meadow, Paradise, and Sugar Pine were closed in 1971. All these actions removed traditional locations for visitor activities in order to improve protection for sequoia groves and to ensure visitor safety. Giant Forest village is not the only area where historic development patterns have resulted in conflicts with resource preservation. Decisions to be made relate to historic facilities in or near sensitive areas, the wisdom of retaining historic development patterns, or replacing / restoring historic facilities that have been damaged or destroyed. Meanwhile, visitor use has been substantially improved through more efficient use of parking space.

  Utilities. To what extent should utility systems be relocated or upgraded to improve resource conditions and meet expanding visitor needs?

  Housing. To what extent can and should staff housing needs be met within the parks? Department of the Interior policy seeks to reduce housing in parks. Can some housing needs be met outside the parks? How can housing needs of volunteers be met? While staff may buy or rent housing locally, some permanent park and concession staff need housing close to their jobs to provide critical visitor services, 24-hour emergency services, or on-site resource protection. Factors to be considered in providing on-site housing include job requirements, public safety, availability of affordable local rental housing, and excessive commute time or distance. Seasonal staff housing has generally been dormitory style cabins or tent tops with centrally located communal baths and kitchens.

- *To what extent should the parks provide educational programs and activities for day use?*

  The answer will depend on the vision that is adopted for the parks. Visitors enjoy contact with interpretive ranger staff and the education that is provided as a result. In fact, over 54% of the Planning Workbook respondents said that naturalist activities and media should be expanded. But in recent years educational programs in the parks have been reduced due to a smaller staff as parks strive to balance budgets in times of increasingly complicated resource management staffing mandates, continual park maintenance activities, and more law enforcement ranger needs. While some free ranger programs continue, especially during the peak season, education has focused on providing campfire programs, which tend to benefit overnight visitors.

Appropriateness of Various Land Uses within Park Boundaries

- *To what extent do private inholdings at Wilsonia, Oriole Lake, Silver City, and Mineral King further the parks' purposes, as well as the NPS mission?*

  These inholdings predate the establishment of the parks. While the Land and Water Conservation Fund was set aside to purchase private land within park boundaries, congressional dispersal of funds for land acquisition has lagged since 1980. NPS policy is to acquire inholdings from willing sellers.

  Wilsonia in Grant Grove Village. Wilsonia is an inholding with several hundred vacation residences on the west side of Grant Grove village. The general management plan needs to decide a future for the area. What are appropriate uses and adaptive reuses of NPS-owned buildings within a private historic district? Is it appropriate to adaptively reuse housing structures for office space? How does water and wastewater usage by Wilsonia residents impact the park or the nearby sequoia grove? Should privately owned buildings be used for commercial purposes, for example, as bed-and-breakfast establishments, thus giving visitors additional lodging choices?

  Oriole Lakes in Sequoia National Park. Located in a remote area at the end of a rough, privately owned road are fewer than seven inholdings that are surrounded by designated wilderness. Some day hiking occurs in this area, mostly by local park visitors. The decision to be made is whether public ownership should be pursued in order to provide public access to the uncommon, foothill lake environment or to expand wilderness protection.

  Silver City and Kaweah Han in Sequoia National Park. Silver City was developed in the 1930s when the Mineral King Road was built. Conservation easements to protect park resources and maintain visual compatibility are in place for the Silver City Resort. The vision that is decided for this area must relate to the vision for the Mineral King area.

  Kaweah Han is a 60-acre private inholding of forested property adjacent to Silver City within the Mineral King area. It was purchased in 2002 and is expected to remain in residential use. The plan needs to look at possible management options in case ownership or use changes in the future. The property contains numerous structures and related improvements, including a rustic lodge.

  Mineral King Valley Inholdings. A few very small inholdings in the valley are remnants of old mining property or property acquired for skiing development in the 1960s.

  The park has been working with other property owners to acquire inholdings, some of which are used for public trailhead parking.

- *What long-term uses of the Boy Scout permit camp at Wolverton would be consistent with the purposes of Sequoia National Park?*

  The Boy Scouts of America have had a special use permit for a seasonal campground near Wolverton. The plan must decide if continuing the Boy Scout Camp is the highest and best use of that area or whether public use would be more appropriate.

- *What long-term uses of the Mineral King cabins would be consistent with the purposes of Sequoia National Park?*

  The 1978 law that added Mineral King to Sequoia National Park provided the National Park Service with limited authority to issue special use permits in five-year increments for the continued use of privately owned cabins located on public land. These special use permits could only be issued for individual cabins to permittees of record in 1978. After the transfer of the Mineral King area to the park, the National Park Service issued about 60 special use permits for the continued use of these privately owned cabins. Over the years permits have been reissued in five-year increments to surviving permittees of record. In accordance with Public Law 95-625, the permits are non-transferable and can be revoked by the National Park Service at any time if the service determines that continued use of the cabins by private parties is incompatible with park purposes or if the land is needed for park purposes. Because the permittees of record from 1978 are aging, some permittees and their families have expressed a strong desire to continue using a cabin even after the death of the permittee of record. This general management plan addresses the feasibility and appropriateness of continuing to issue special use permits to family members after the permittees of record are deceased.

Relationship to Park Purpose and Significance and to Park Visions

- *To what extent would additional wilderness be compatible with alternative park visions?*

  The general management plan should determine what amount of wilderness is compatible with the park vision. However, wilderness studies and subsequent recommendations to Congress are not part of the general management plan.

  Sequoia and Kings Canyon National Parks contain vast areas of inaccessible backcountry that offer opportunities for solitude and primitive and unconfined recreation. With population increases, support for retaining untouched primeval areas is increasing. Numerous public comments during the planning process suggested that additional wilderness should be designated within the parks: more than 59% of comments on the Planning Workbook supported additional wilderness as a contributing factor to the essential character of the parks; this increased to 77% for some areas. Other commenters were confused about what wilderness designation means or felt that the 1984 designation of wilderness (which now comprises about 83% of the parks) was sufficient.

  Congress requires the National Park Service to look at the wilderness suitability of areas that have been added to the parks — land above the 8,000-foot elevation at Mineral King, which was added in 1978, and the Chimney Rock area, which was added in 1984 as part of the Jennie Lakes addition. Additionally, NPS policy indicates that new acquisitions, such as the 2001 Dillonwood expansion, should be assessed for wilderness suitability and eligibility. There are two small areas of potential wilderness at Bearpaw Meadow (a high Sierra camp) and Oriole Lake (private inholdings and

road access) that will become wilderness if non-conforming facilities are removed.

Three areas were recommended to Congress in the 1984 as suitable and eligible for wilderness designation, but they were not designated. These areas, which include Redwood Canyon, the North Fork of the Kaweah, and the Hockett Plateau, have therefore been managed as wilderness. Substantial public support was shown by people responding to the Planning Workbook for wilderness designation of these areas — 77% for Redwood Canyon, 65% for the North Fork of the Kaweah, and 75% for the Hockett Plateau. At the same time, there has been some discussion about excluding portions of these areas from wilderness to accommodate certain activities and facilities. For example 59% of the workbook respondents said the Colony Mill Road should be excluded to accommodate bicycle use. A few people proposed excluding about 40 acres from the Hockett Plateau to accommodate another high Sierra camp.

Compatibility of these types of actions with a vision for the parks needs to be explored.

- *How should the parks preserve and protect both cultural and natural resources while enhancing visitor enjoyment and safety?*

  According to *NPS 28: Cultural Resource Management Guideline,*

  > The goal of cultural resource planning in the national park system is to identify and preserve park cultural resources and provide for their appreciation by the public. It strives to integrate cultural resource concerns into broader NPS planning processes, to avoid or minimize harm to cultural resources, to identify the most appropriate uses for cultural resources, and to determine the ultimate treatment (preservation, rehabilitation, restoration, reconstruction/reproduction) or deliberate neglect or destruction for cultural resources.

Once cultural resources are identified and evaluated for significance, effective cultural resource management must address what should be done to properly care for a cultural resource and how do cultural resources fit into the overall scheme of park management? While the National Park Service strives to preserve and protect cultural resources whenever possible, funding and staffing are insufficient to preserve and protect all such resources in the parks. In addition, cultural resources are only one of many resources requiring attention in the parks. Planning for this general management plan must strike a balance between equally important but conflicting resources or values by weighing the tradeoffs, for example, between the preservation and protection of cultural resources and the preservation of natural resources, the enhancement of visitor experience and safety, and the park's operational concerns. Any action affecting cultural resources listed on or eligible for listing on the National Register of Historic Places, however, will only be undertaken after appropriate consultations with the California state historic preservation office, any associated Indian tribes, other interested agencies or organizations, and the general public.

Park policy encourages adaptive reuse of historic structures where feasible, but resulting renovation costs typically exceed costs of new construction, and historic building patterns may have imperiled natural resources. Decisions may also have to consider the value and significance of cultural resources to local or national constituencies, and the decision can be compounded by additional factors such as private ownership of structures. When asked about what should be the emphasis for cultural resource preservation / protection in the

Planning Workbook, 56% of the respondents wanted to emphasize the preservation of examples of all park historic and cultural themes, 25% wanted to preserve a large number of resources related to specific themes, and 19% wanted to emphasize interpretation rather than preservation.

BOUNDARY ADJUSTMENTS

Expansions to Sequoia and Kings Canyon National Parks were authorized in 1890, 1926, 1940, 1965, 1978, and 2000. During public scoping meetings for this planning effort, various citizens proposed park expansions in addition to others that have been previously proposed. NPS policy has defined specific criteria that must be met for land to be considered appropriate for inclusion in a national park (see text box). The secretary of the interior has some authority to make minor boundary adjustments in existing park units, while occasionally smaller boundary adjustments can be accomplished administratively through land protection plans or special studies.

Sequoia National Park is continuing to seek purchase of an 11-acre parcel adjacent to the western boundary of Sequoia National Park at the end of North Fork Drive (the Alley property). This property would facilitate visitor access to the park. This addition would meet the second criteria for boundary adjustments: to address operational and management issues, such as the need for access or the need for boundaries to correspond to logical boundary delineations such as topographic or other natural features or roads.

As required by NPS policy, other suggested additions must be considered during the general management planning process. The following boundary expansion proposals were mentioned by the public and are grouped according to related goals.

Goal: Increase Resource Protection

Portions of the John Muir Wilderness in Inyo National Forest. These additions were suggested because they would better meet the park mission to protect the habitat of California bighorn sheep (recently listed as a federal endangered species).

Goal: Expand Opportunities for Cultural Resource Enjoyment

Portions of the Sequoia National Forest South of California Highway 180. These additions were suggested because they would enhance but not duplicate opportunities for public enjoyment of significant

NPS Boundary Adjustment Criteria

Section 3.5 of the NPS *Management Policies 2001* state that boundary adjustments may be recommended to:

- Protect significant resources and values, or to enhance opportunities for public enjoyment related to park purposes;
- Address operational and management issues, such as the need for access or the need for boundaries to correspond to logical boundary delineations such as topographic or other natural features or roads; or
- Otherwise protect park resources that are critical to fulfilling park purposes.

All recommendations for boundary changes must meet the following two criteria:

- The added lands will be feasible to administer, considering their size, configuration, ownership, hazardous substances, costs, the views of and impacts on local communities and surrounding jurisdictions, and other factors such as the presence of exotic species; and
- Other alternatives for management and resource protection are not adequate.

historic resources, including key sites related to giant sequoia logging history (Converse Basin and logging flumes / railroad development). These areas are now within the Giant Sequoia National Monument, and they are currently accessible by road and trail. Other reasons that have been mentioned are to include all sequoia groves, to unify management, to simplify access, and to establish boundaries that correspond to readily identifiable natural or man-made features. The area includes the Jennie Lakes wilderness and private inholdings, some of which provide visitor services (such as the Hume Lake Christian Camp, the Kings Canyon Lodge, the Montecito-Sequoia Lodge, and Stony Creek village). Different agency missions and regulations have allowed grazing, logging, hunting, and snowmobiling.

Goal: Increase Resource Protection, Administrative Efficiency, and Recreational Opportunities

BLM Land near the North Fork and Case Mountain. This area was suggested to increase administrative efficiency, to provide additional foothills recreation areas, and to include sequoia groves within the park.

Portions of the Golden Trout Wilderness in Sequoia National Forest. This area was suggested to even out the park boundary because this area is a peninsula jutting into the park. However, it is in a different watershed, with trail access only, and it is not recommended for further study.

Many of these resources are now managed by federal agencies (for example, the U.S. Forest Service manages Giant Sequoia National Monument) or have been added to Sequoia National Park as a result of the Dillonwood addition. Therefore, these boundary expansion proposals are no longer considered necessary. The National Park Service will continue to coordinate management with other land management agencies to ensure the protection of resources.

SCOPE OF THE IMPACT ANALYSIS

Impact Topics Considered in this Environmental Impact Statement

Impact topics were selected for analysis based on the major values or issues identified in the planning process, as well as applicable laws and executive orders (e.g., Endangered Species Act of 1973, as amended; Executive Order 11988 "Floodplain Management," section 106 of the National Historic Preservation Act). In addition, the NPS *Management Policies 2001* and resource management guidelines call for the consideration of natural and cultural resources in planning.

Natural Resource Topics

- Cave resources
- Water resources, including hydrology, water quality, and floodplains
- Vegetation and soils, including general vegetation, sequoia groves, and meadow, riparian, and aquatic communities
- Wildlife and wildlife habitat
- Threatened, endangered, and sensitive species
- Air quality

Wild and Scenic Rivers

- Effects of the alternatives on wild and scenic rivers

Backcountry / Wilderness

- Effects of the alternatives on wilderness or backcountry management

Cultural Resource Topics

- Historic structures, districts, and cultural landscapes
- Archeological resources
- Ethnographic resources and landscapes
- Museum collections and archives

Transportation

- Effects of transportation-related proposals on carrying capacity

Visitor Experience

- Park character
- Visitation
- Educational opportunities (including educational facilities, programs, and outreach)
- Recreational opportunities (including opportunities to experience a full range of park resources, traditional recreational experiences, nontraditional or new recreational experiences, and stock use)
- Visitor services (including overnight lodging, camping opportunities, and other facilities and services)

Private Land and Special Use Permits on Park Land

- Privately owned lands within the parks (inholdings)
- Special use permits
- Boundary adjustments

Park Management, Operations, and Facilities

- Staffing, infrastructure, visitor facilities, and services
- Operations of non-NPS entities, including the Sequoia Natural History Association, concessioners, commercial or incidental business permit holders, partners, and volunteers
- Other federal agencies

Socioeconomic Environment

- Local and regional economies
- Special use permits and inholdings
- Park concessioners
- Park staffing and budget

Impact Topics Dismissed from Further Analysis

The following topics were dismissed from further analysis because the alternatives being considered would have no discernible effect on the resource, or the resource does not occur in the parks.

Geology and Geologic Processes — Although some localized earthwork associated with facility or road construction may occur under some of the alternatives, there would be no alteration of overall geology or geologic processes within the parks. Impacts to cave resources and soils are addressed.

Prime and Unique Farmlands — This plan would not involve or affect any agricultural lands, and thus no further discussion of this topic is necessary.

Environmental Justice — No socially or economically disadvantaged population would be adversely affected to a disproportionate degree by any of the alternatives.

Soundscape / Night Sky — Nothing in the range of alternatives would affect the natural soundscape or the night sky.

Relationship to Other Planning

NPS PLANS

Plans for Giant Forest

The 1980 *Development Concept Plan for Giant Forest / Lodgepole* set the direction for removing facilities from the Giant Forest. A 1,700-car parking garage at a staging area (the Wolverton corrals) was proposed to support transit and day use, but it was never built. The 1996 *Giant Forest Interim Management Plan* finalized the planning to remove facilities from Giant Forest and convert it to day use. The major elements of that plan are essentially incorporated into this general management plan. The parking garage remains as an approved project, but it is no longer seen as consistent with the park mission.

Management Plans

The *Natural and Cultural Resources Management Plan* serves as the foundation for the parks' resource stewardship programs, and its management recommendations are incorporated into the general management plan through broad park mission goals related to resource stewardship. The *Resources Management Plan* further defines these goals, describes existing resource conditions and how they differ from the desired future conditions envisioned in the goals, identifies major issues and stressors that are causing divergence from the desired future conditions, and outlines a long-term, comprehensive strategy for addressing each major issue. The parks' *Strategic Plan* then identifies which actions outlined in the *Resources Management Plan* are to be implemented over the next five years. The plan also proposes a coordinated program to identify, protect, preserve, and enhance the natural and cultural resources of these two parks. It draws upon appropriate legislation and NPS policy, as well as on knowledge of the resources of the parks and their special needs.

The parks' current *Backcountry Management Plan* was approved in 1986 and provides direction for managing wilderness and backcountry areas. It is expected that upon completion of the general management plan a comprehensive wilderness management plan will be completed. Some important issues that are addressed in this draft general management plan / environmental impact statement, such as the continuation of stock use, the extent of wilderness compatible with each alternative, and the general level of commercial services, will directly affect the content of a revised backcountry / wilderness management plan.

A new *Fire and Fuels Management Plan* has been developed to replace the *Fire Management Plan* approved in 1989. Park staff have been mapping fire history, and the new plan is based on recent science and research, as well as updated national policies. In the unlikely event of conflicts or implementation gaps, the approved general management plan will supersede the *Fire and Fuels Management Plan.* A natural-like fire regime will play an integral role in preserving park landscapes.

Beginning in 2004, the parks will update the 1984 *Water Resources Management Plan*, which will identify water rights and study surface and groundwater availability.

Transportation studies and shuttle implementation plans are being developed for the transit recommendations in the *Giant Forest Interim Management Plan.* These include developing a shuttle plan with routes and stops, a parking management plan, and facility planning for shuttle maintenance and storage.

A gateway community transit connection concept plan is being prepared to develop a transit vision and conceptual action plan for Sequoia and Kings Canyon National Parks, other federal land agencies, and gateway communities in the San Joaquin Valley of central California. The planning team is looking

at the value of transit connections, economic benefits to valley communities, air quality benefits, effect on public land resource protection, potential visitor experience enhancements, and partnerships between the National Park Service and local, state, and federal agencies, as well as the private sector.

The *Museum Collections Management Plan* covers the scope of collections (that is, the types of natural and cultural specimens and artifacts appropriate for the parks to collect, related to the parks' purpose and significance); the maintenance of records of the collections and archives for resource management and research; the protection of and security for the collections and archives regarding fire detection and suppression and possible theft and vandalism; storage conditions; and planning for staffing, storage, and research needs for the anticipated growth of the collections and archives.

Design Guidelines

The *Sequoia and Kings Canyon National Parks Design Guidelines* define appropriate materials, approaches, and quality, as well as the approach to historic resources.

The *Architectural Character Guidelines* (NPS 1989a) establish an approach to retain the character of past architectural styles in the parks, particularly those related to early national park architecture and the CCC era.

The *Road Character Guidelines* (NPS 1990) document elements of the road system that are important to its character. These include stone culverts and retaining walls, signs, and historic bridges.

The *Exterior Lighting Design Concepts* (NPS 1992a) complement the *Architectural Character Guidelines* by establishing standards for low levels of lighting that will minimize light pollution and be compatible with architectural styles.

Long Range Interpretive Plan

A "Long-Range Interpretive Plan" for Sequoia and Kings Canyon National Parks was completed in 1997. A revised comprehensive interpretive plan will be completed following the approve of the general management plan. The primary interpretive themes identified in the "Long-Range Interpretive Plan" are common to all alternatives:

- The natural resources of the southern Sierra Nevada have undergone a series of human uses and impacts as values for those resources have evolved.
- Giant Sequoia, which grow only on the western slope of the Sierra Nevada, have a fascinating ecology which allows them to become the largest, and some of the oldest, trees in the world.
- Because of the enormous topographic relief of the southern Sierra Nevada, the range creates a wide range of climates, shaping a diversity of interconnected habitats, each of which is occupied by carefully adapted, interdependent organisms.
- The Sierra Nevada was created by and continues to be acted upon by a variety of geologic forces.
- The Sierra Nevada environment, which plays a critical role in defining the region's climate, geography, and economy, is greatly affected by human activities within the region.
- Sequoia and Kings Canyon National Parks protect a large wilderness area, where natural forces prevail and which provides significant scientific and social values to the world.

Visitor experience goals are to (1) make available a variety of experiences to visitors, including the ability to access orientation and activity planning; (2) interact safely with natural and cultural resources; (3) experience park environments by exploring trails; (4) learn about resources through a variety of media; (5) understand the ecosystem; (6) learn about and

appreciate less readily available resources; (7) be introduced to vulnerabilities of resources to human activities; (8) be provided opportunities to learn skills needed to enjoy the parks; and (9) encourage visitors to appreciate the national park system and its mission and to recognize naturalness and wildness as values preserved in parks.

PLANS FOR ADJACENT FEDERAL LANDS

Bureau of Land Management, Resource Management Plan. The 1996 *Caliente Resource Management Plan* finds that the Middle, East, and North Forks of the Kaweah River, which are adjacent to Sequoia National Park, are eligible for inclusion in the wild and scenic rivers system. Case Mountain would continue to be open to the leasing of oil and gas resources subject to raptor stipulations but would be closed to the leasing of geothermal resources. Additionally, travel within sequoia groves would be limited to pedestrians. Currently allotted livestock grazing would continue to be authorized, but grazing within sequoia groves would be terminated if any negative effects were shown by studies.

U.S. Forest Service Wilderness Management Plans. The Golden Trout Wilderness is being managed under a 1982 *Wilderness Management Plan* that was reaffirmed in the 1989 *Sequoia National Forest Plan.* In 2001 a *Wilderness Management Plan* was approved for the John Muir, Ansel Adams, and Dinkey Lakes Wildernesses. Management plans have not been prepared for either the Monarch Wilderness or the Jennie Lakes Wilderness.

Giant Sequoia National Monument. As directed in the presidential proclamation establishing the national monument, a combined *Management Plan and Final Environmental Impact Statement* was completed in December 2003 (USFS 2003a). A scientific advisory board, selected in consultation with the National Academy of Sciences, provided guidance for the plan.

The stated objects of interest in the plan are

- the naturally occurring groves of giant sequoia, which are described in the proclamation as "magnificent groves of towering giant sequoias, the world's largest trees"
- the ecosystems within the monument that surround the groves and provide enriching recreational and social experiences, outstanding landscapes, and an array of rare and endemic species, such as the fisher, the great gray owl, the American marten, the northern goshawk, the peregrine falcon, the spotted owl, and the condor
- the historical landscape in and around the Hume Lake basin associated with the Euro-American use of the giant sequoias since the late 1800s
- the limestone caverns and prehistoric archeological sites that provide a paleontological record of the ecological changes that giant sequoias have undergone, as well as a prehistoric record of the relationship of the area to the native tribes

As stated in the "Record of Decision" (USFS 2003b), the plan

> establishes management direction in four areas: the protection of communities and other valuable resources from catastrophic fire, ecological restoration, recreation and human use, and transportation. In the first two decades [of plan implementation], the protection strategy will be emphasized to reduce the risk of stand-replacing wildfires. The highest priority will be to protect communities and the second priority will be to protect sequoia groves and other important resources such as wildlife and aquatic habitat. The highest priority for ecological restoration (restoration strategy) will be the restoration of plantations created by past logging and wildfires. Opportunities will be taken where they exist to address ecological restoration needs during protection

activities. A wide range of recreational opportunities will continue to be provided. Management direction provides a sound foundation for changes and additions to recreational facilities and services in response to public demand. The current road system will generally remain intact, providing access for the protection of communities and resources from wildfires, as well as providing good access to a broad spectrum of existing recreational opportunities. The road system will provide access for the Tule River Indian Reservation for the protection of their resources and culturally important sites and resources. The overall ecological condition of riparian areas will gradually improve as portions of roads or recreational sites that are inconsistent with the aquatic management strategy are restored.

Sierra Nevada Forest Plan Amendment. In January 2004 the Forest Service issued the *Sierra Nevada Forest Plan Amendment* to improve the protection of old forests, wildlife habitats, watersheds, and communities in the Sierra Nevada and the Modoc Plateau (USFS 2004).

The new plan will reduce the number of acres burned by severe wildfires by more than 30% within the next 50 years. It will double the acres of large old-growth trees and California spotted owl nesting habitat over the next 50 years. Around communities, fuels will be reduced on about 700,000 acres over the next 20 years, helping to protect them from severe wildfires.

STATE AND REGIONAL PLANS

Sierra Nevada Ecosystem Plan. The *Sierra Nevada Ecosystem Plan* represents a major public effort using science to assess ecosystem conditions. It identifies five major natural resource threats — air pollution, increased insularity and habitat fragmentation, invasion by nonnative species, loss of a natural fire regime, and climate change. The general management plan alternatives do not affect or alter these threats.

The federal sequoia managers plan focuses on the consistent management of giant sequoia groves.

State Route 65 Transportation Concept Report. The *State Route 65 Transportation Concept Report,* by Caltrans District Office 6, is a 20-year plan for a 302-mile north-south highway from near Bakersfield to near Yuba City; 181 miles are yet to be constructed. The route serves recreational traffic to Sequoia and Kings Canyon National Parks. Between 2010 and 2020, California 65 north of California 198 is projected to be constructed with funds from the Kern and Tulare Regional Improvement Program, the Caltrans Interregional Improvement Program, and the Governor's Traffic Congestion Relief Program.

Comprehensive Statewide Historic Preservation Plan for California, 2000–2005. The *Comprehensive Statewide Historic Preservation Plan* for California describes the vision for historic preservation in California and outlines future direction for the Office of Historic Preservation. The plan identifies the critical preservation issues, needs, challenges, and opportunities for historic preservation in California. The plan expresses the shared vision and active contribution of a wide range of public and private organizations and individuals with vested interests in historic preservation programs, issues, and concerns.

Section 106 of the National Historic Preservation Act of 1966 requires that federal agencies consult with the state historic preservation officer and, as appropriate, associated Indian tribes and the general public prior to taking any action that affects cultural resources listed on or eligible to be listed on the National Register of Historic Places. Sequoia and Kings Canyon National Parks will fulfill all their obligations under section 106.

LOCAL PLANS

Three Rivers Policy Framework. The gateway community of Three Rivers updated its *Policy Framework* in June 2002. The framework addresses goals in five categories to retain the community's small rural character: land use and community character, natural environment, community facilities and services, transportation (mobility and access), and public safety. Future implementation mechanisms include surveys, guidelines, standards, plans and maps, natural resource mapping, floodway designation, scenic corridor designation, and regulations in addition to coordination and development plans. Many proposed policies (use of native plants, viewshed protection, controls on exterior lighting) are consistent with those of the National Park Service, and the general approach is compatible with the draft general management plan alternatives. The Three Rivers *Policy Framework* is intended to coordinate with the *Tulare County Foothill Growth Management Plan.*

Natural environment objective 5.2 relates to protecting and preserving the natural features and quality of the Kaweah River and all of its tributaries, both perennial and intermittent. Several proposed policies related to this objective are similar to protection measures for wild and scenic rivers that are discussed in this document.